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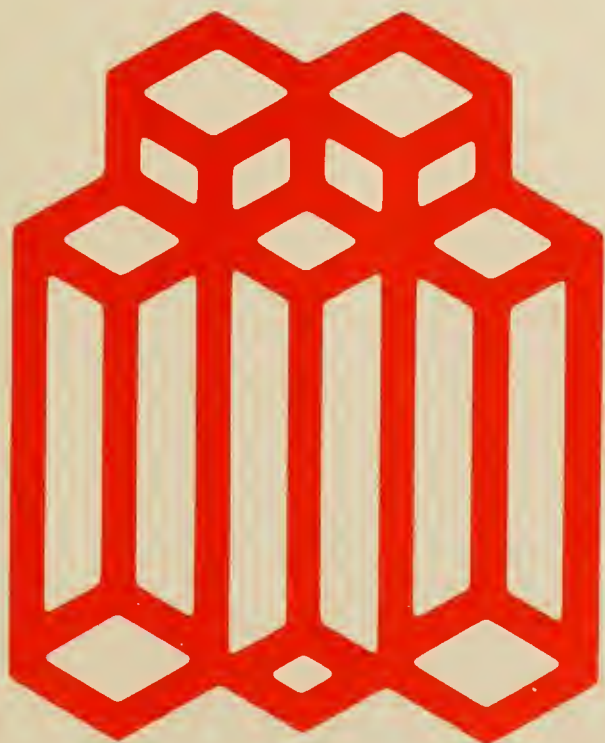
Census of Mineral Industries

MIC82-I-12A

INDUSTRY SERIES

Coal Mining

Industries 1111, 1112, 1211, and 1213



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The publications
from the 1982 Economic and
Agriculture Censuses are dedicated
to the memory of Shirley Kallek,
Associate Director for Economic Fields.
During her career at the Bureau of the
Census (1955 to 1983), she continually
directed efforts to improve
the timeliness and accuracy of
economic statistics.

1982

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Issued February 1985



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Clarence J. Brown, Deputy Secretary
Sidney Jones, Under Secretary for
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ACKNOWLEDGMENTS—Many persons participated in the various activities of the 1982 Census of Mineral Industries. Primary direction of the program was performed by Shirley Kallek, Associate Director for Economic Fields (until May 1983), Charles A. Waite, her successor, and Michael G. Farrell, Assistant Director for Economic and Agriculture Censuses (until August 1984), and John H. Berry, his successor.

This report was prepared in the Industry Division under the general direction of Roger H. Bugenhagen, Chief (until April 1983), and Gaylord E. Worden, his successor. Jacob Silver, Assistant Chief for Mineral Industries and Special Reports, was responsible for the overall management of the census of mineral industries. He guided the planning and implementation of the project and coordinated activities with other divisions.

Program responsibility was shared by the following individuals who participated importantly in the entire program: John P. McNamee, Chief, Minerals Branch; Dale W. Gordon, Chief, Census/ASM Durables Branch; Michael J. Zampogna, Chief, Census/ASM Nondurables Branch; Bernard J. Fitzpatrick, Chief, Census Special Reports Branch (until April 1983), Bruce M. Goldhirsch, his successor; and Kenneth I. Hansen, Chief, Annual Survey of Manufactures Branch.

Joyce Pomeroy, assisted by Eva Snapp, was directly responsible for the analysis of the data and preparation of this report.

Dr. Edward A. Robinson, Senior Industry Statistician, made significant contributions to the basic economic concepts and content of the census. The computer processing systems were developed and coordinated under the direction of William E. Norfolk, Assistant Chief for Operations. Sarah A. Mathis, Chief, Census Programming Branch, was responsible for implementation of the computer systems, and the computer programs were prepared under the supervision of David Onions and Gerald S. Turnage, assisted by Barbara A. Lambert and Willie T. Robertson. The mathematical techniques and quality control requirements were developed by Preston J. Waite, Assistant Chief for Research and Methodology, assisted by Stacey Cole, Pamela McKee, Amelia M. Perego, Magdalene Ramos, and Anne M. Stephens.

Industry classification was controlled by Bruce M. Goldhirsch; coordination activities with Data Preparation Division were carried out by Eric Taylor; and the various phases of the publication process were coordinated by Lillie Mae Skinner. Other persons made important contributions in such areas as developing specifications, procedures, and resolving problems. They include Richard J. Sterner, Robert A. Rosati, Richard Sweeney, Cyr F. Linonis, Leonard Pomeroy, Patricia L. Horning, and Dennis L. Wagner.

Systems and procedures for mailout, receipt, correspondence, data input, industry classification, other clerical processing, administrative

record processing, and quality control, along with the associated electronic computer programs, were developed in the Economic Surveys Division, W. Joel Richardson, Chief.

Planning, design, review, and composition of report forms were performed in the Administrative Services Division, Robert L. Kirkland, Chief.

Publication planning, design, editorial review, composition, and printing procurement were performed in the Publications Services Division, Raymond J. Koski, Chief.

Geographic coding procedures and associated computer programs were developed in the Geography Division, Robert W. Marx, Chief.

Mailout preparation and receipt operations, clerical and analytical review activities, data keying, and geocoding review were performed in the Data Preparation Division, Don L. Adams, Chief.

Computer processing was performed in the Computer Services Division, C. Thomas DiNenna, Chief (until February 1984), and John E. Halterman, his successor.

Photocomposition programs for the statistical tables were developed in the Systems Support Division, Larry J. Patin, Chief (until October 1983), and Arnold E. Levin, his successor.

Special-purpose computer programs for disclosure analysis were developed in the Business Division, Gerald F. Cranford, Chief (until December 1983), and Howard N. Hamilton, his successor.

The overall planning and review of the census operations were performed by the staff of the office of the Assistant Director for Economic and Agriculture Censuses.

Special acknowledgment is also due the many businesses whose cooperation has contributed to the publication of these data.

Library of Congress Cataloging in Publication Data

Census of mineral industries (1982)
1982 census of mineral industries.

Contents: [1] Subject series — [2] Industry series — [3] Geographic area series.
Supt. of Docs. no.: C 3.216: MIC82-I-

1. Mineral industries--United States--Statistics.
I. United States. Bureau of the Census. II. Title.
HD9506.U62C45 1984 338.2'0973 83-600142

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

INTRODUCTION

	Page
ECONOMIC CENSUSES OVER TIME	III
USES OF THE ECONOMIC CENSUSES	III
AUTHORITY AND SCOPE OF THE ECONOMIC CENSUSES	IV
CENSUS OF MINERAL INDUSTRIES	IV
General	IV
Scope of Census and Definition of Mineral Industries	IV
Establishment Basis of Reporting	IV
Use of Administrative Records	V
Auxiliary Establishments	V
Industry Classification of Establishments	V
Value of Shipments for the Industry Compared With Value of Product Shipments	VI
CENSUS DISCLOSURE RULES	VI
MICROFICHE	VI
SPECIAL TABULATIONS	VI
ABBREVIATIONS AND SYMBOLS	VI

ECONOMIC CENSUSES OVER TIME

The early beginnings of America's industrial output were first measured in the United States in the 1810 Decennial Census and again in 1820, when questions on manufacturing were included with those for population. Beginning with the 1840 Decennial Census, there were enumerations of manufactures and mineral industries at 10-year intervals up to and including the year 1900 for manufactures and 1940 for mineral industries. The latter census was taken again for 1954, 1958, 1963, and 1967.

Because of the increasing dominance of manufacturing in the early 20th century, Congress directed that quinquennial censuses of manufactures be taken beginning in 1905. However, from 1919 through 1939, these censuses were conducted every 2 years. The need for war-related current surveys in the early 1940's postponed the next census of manufactures until 1948 (for 1947). That census was again taken for 1954, 1958, 1963, and 1967.

Retail and wholesale trade data were first collected in 1930, and in 1933 information on selected service industries was added to the data-collection operation. These business censuses, as they were called, were again taken for 1935, 1939 (as part of the 1940 decennial program), 1948, 1954, 1958, 1963, and 1967.

Information on construction industries was first obtained in 1930 and again for 1935 and 1939. Data for the full spectrum of construction industries were not gathered again until 1968 (for 1967).

The need for transportation data to supplement information available from existing governmental or private sources was recognized by Congress in the late 1950's and early 1960's. The census of transportation (consisting of several surveys) was first taken for 1963 and again for 1967.

Since 1967, all of the above censuses have been taken quinquennially as part of the Census Bureau's economic census program. (For the 1977 censuses, the coverage of the service

industries was broadened from "selected services" to all services, except religious organizations and private households. A total of 41 additional four-digit standard industrial classifications¹ (SIC's) in 7 SIC major groups was added to the scope of the census. While most of the industries included for the first time for 1977 were covered again for 1982, some were not, i.e., hospitals; elementary and secondary schools; colleges, universities, and professional schools; junior colleges and technical institutes; labor unions and similar labor organizations; and political organizations.)

The first manufacturing census for an outlying area was conducted in Puerto Rico for the year 1909. Thereafter, with the exception of 1929, a census was taken at 10-year intervals through 1949. The first censuses of retail trade, wholesale trade, and selected service industries in Puerto Rico were conducted for 1939. These censuses also were taken for the years 1949, 1954, 1958, 1963, and 1967. A census of construction industries was first introduced in Puerto Rico for 1967. These censuses of Puerto Rico have been taken since then for the years 1972, 1977, and 1982.

Censuses of manufactures, retail trade, wholesale trade, and selected service industries were conducted in Guam and the Virgin Islands of the United States for 1958, 1963, 1967, 1972, 1977, and 1982. Censuses of mineral industries were taken in the Virgin Islands of the United States for the years 1958, 1963, and 1967 but not since that time. A census of construction industries was also undertaken in these areas for 1972, 1977, and 1982.

Retail trade, wholesale trade, selected service industries, manufacturing, and construction industries were canvassed for the first time in the Northern Mariana Islands in 1983 (for 1982).

For 1982, the economic censuses and agriculture censuses were conducted concurrently.

USES OF THE ECONOMIC CENSUSES

The economic censuses are the major source for facts about the structure and functioning of the Nation's economy and provide essential information for government, business, industry, and the general public. They provide an important part of the framework for such composite measures as the gross national product, input-output measures, indexes of industrial production, and indexes measuring productivity and price levels. Information from the censuses is used to establish sampling frames and as benchmarks for current surveys of business activity, which are essential for measuring short-term economic conditions.

¹Standard Industrial Classification Manual: 1972. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Stock No. 041-001-00066-6. 1977 Supplement. Stock No. 003-005-00176-0.

State and local governments use census data to assess business activities within their jurisdictions. The private sector uses the data to forecast general economic conditions; analyze sales performance; lay out sales territories; allocate funds for advertising; decide on locations for new plants, warehouses, or stores; and measure potential markets in terms of size, geographic areas, kinds of business, and kinds of products made or sold.

Following every census, thousands of businesses and other users purchase reports. Likewise, census facts are widely disseminated by trade associations, business journals, and newspapers. Volumes containing census statistics are available in most major public and college libraries. All 1982 data are available on microfiche from the U.S. Government Printing Office and most data on computer tape from the Census Bureau. Finally, the more than 50 State Data Centers also are suppliers of economic census statistics.

AUTHORITY AND SCOPE OF THE ECONOMIC CENSUSES

The economic censuses are required by law under title 13 of the United States Code, sections 131, 191, and 224, which directs that they be taken at 5-year intervals for the years ending in 2 and 7. The 1982 Economic Censuses covered manufacturing, mining, construction industries, retail trade, wholesale trade, service industries, and selected transportation activities. Special programs also cover minority-owned and women-owned businesses. The next economic censuses are scheduled to be taken in 1988 for the year 1987.

CENSUS OF MINERAL INDUSTRIES

General

The 1982 Census of Mineral Industries is the 19th census of mining establishments in the United States. For 1982, it was conducted jointly with the censuses of manufactures, construction industries, retail and wholesale trades, service industries, selected transportation activities, and minority-owned and women-owned businesses.

This report, from the 1982 Census of Mineral Industries, is one of a series of 12 industry reports, each of which provides statistics for individual industries or groups of related industries. Additional separate reports will be issued for each geographic division showing statistics by State and on special subjects, such as size of establishments, type of organization, assets, capital expenditures, type of operation, and fuels and electric energy consumed.

These separate reports subsequently will be issued as portions of the final census volume. The volume—Subject, Industry, and Area Statistics—will show comparative figures for industries and States on the more important measures of the activity of mining establishments, such as employment, payrolls, value of shipments and receipts, capital expenditures, value added by mining, selected supplies consumed, and energy used. It will include, besides the industry statistics, geographic area statistics (number of establishments, employment, payrolls, value added, cost of supplies, value of shipments and receipts, and capital expenditures) for each State and county, by industry group. The introduction to the final volume of the census of mineral industries will discuss, at greater length, many of the subjects

described in this introduction. For example, the volume text will discuss the economic significance of the mining sector, the relation of value added by mining to value added by manufacture, some of the changes in statistical concepts over the history of the census, and the valuation problems arising from intracompany transfers between mining establishments, manufacturing plants, and sales offices and sales branches of a company.

Scope of Census and Definition of Mineral Industries

The 1982 Census of Mineral Industries covers all establishments with one paid employee or more primarily engaged in mining as defined in the 1972 Standard Industrial Classification (SIC) Manual.¹ This is the system of industrial classification developed over a period of years by experts on classification in government and private industry under the guidance of the Office of Information and Regulatory Affairs, Office of Management and Budget. This system of classification is in general use among government agencies as well as organizations outside the government.

The SIC manual defines mining in the broad sense to include the extraction of minerals occurring naturally: Solids such as coal and ores, liquids such as crude petroleum, and gases such as natural gas. The term "mining" is used in the broad sense to include quarrying, well operation, milling (crushing, screening, washing, flotation, etc.) and other preparation needed to make minerals marketable. Exploration is included as is the development of mineral properties. Services performed on a contract, fee, or other basis in the exploration and development of mineral properties are classified separately but within this division.

Mining operations are classified by industry on the basis of the principal mineral produced or, if there is no production, on the basis of the principal mineral for which exploration or development work is in progress. The recovery of material from culm banks, ore dumps, and other waste minerals piles is classified in the appropriate mining industry according to the mineral product recovered.

The crushing, grinding, or other treatment of certain earths, rocks, and other nonmetallic minerals not in conjunction with mining activities are not included in this division but are classified as manufacturing. Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) also are excluded.

Mining operations carried on as secondary activities at manufacturing establishments (such as clay pits at clay products plants or sand and gravel operations at ready-mixed concrete plants) are not within the scope of this census. However, selected data (production workers' wages and hours; total cost of supplies, fuels, electric energy, and contract work; and quantity of production for mined products) on such mining activities have been obtained in the 1982 Census of Manufactures and are included in the mining reports. They are clearly specified wherever included.

Establishment Basis of Reporting

The census of mineral industries covers each mining establishment of firms with one paid employee or more operating in the United States. A firm operating more than one establishment

¹Standard Industrial Classification Manual: 1972. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Stock No. 041-001-00066-6. 1977 Supplement. Stock No. 003-005-00176-0.

is required to file a separate report for each location. A mineral establishment is defined as a single physical location where mineral operations are conducted.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each State or off-shore area adjacent to a State in which it conducted such activities and to include employment, production, and capital expenditures data at the county level. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services by State and county. These consolidated reports were then allocated to county establishments based on the data reported at the county level. The 1982 figures for establishments include the summation of operations within each county allocated from these State or nationwide reports and, therefore, are not comparable to prior censuses.

Establishments, as presented in this report, are those in operation "during the year." In the General Summary report (MIC82-S-1), a comparison will be made at the U.S. level of the number of establishments in operation "during the year" and at the "end of the year."

Use of Administrative Records

From a mailout universe of about 36,000 mining establishments, approximately 11,000 small single-establishment companies were not mailed a questionnaire. For these establishments, some employment, payroll, and receipts data were obtained from the administrative records of other agencies. Selection of the small establishment nonmail cases was done on an industry-by-industry basis, and a variable cutoff was used to determine those establishments for which administrative records were to be used in place of a census report. This information was then used in conjunction with industry averages and other information to estimate the statistics for administrative-record and nonresponse establishments. The first column in tables 2 and 4 provides an indication of the extent that these establishments account for the figures shown. The value of shipments and receipts and cost of supplies were generally not distributed among specific products and supplies for these establishments, but were included in the product and supply "not specified by kind" categories. Overall, establishments for which administrative-record data were used accounted for less than 2 percent of total value of shipments and receipts.

The industry classification codes included in the administrative-record files were used for those establishments excused from filing census forms. Generally, these codes were assigned on the basis of brief descriptions of the general activity of the establishment. Where the description is incomplete, or where there are relatively fine lines of demarcation among industries or between mining and nonmining activities, the code assigned to an establishment could differ from that which would have been assigned on the basis of more complete product or activity information. Therefore, the total establishment count should be viewed as an approximate measure. The counts for establishments with 20 employees or more are far more reliable.

In the 1982 census, as in the 1977, 1972, and 1967 censuses, data for single-unit firms without paid employees were

excluded. This exclusion had only a slight effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

Auxiliary Establishments

Statistics for employment and payroll for individual industries and industry groups also include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. As in previous censuses, respondents were asked to file separate reports (Form ES-9200) for any separately operated auxiliary establishments. Classification of employment and payroll data at such auxiliary establishments was based on the mining establishments served.

Industry Classification of Establishments

Each of the establishments covered by the census was classified in one of 42 mineral industries in accordance with the industry definitions in the SIC system. Under this system of classification, an industry is generally defined as a group of establishments producing the same main product or closely related group of products. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, and number of employees. Application of these criteria led to formulation of 42 mining industries, to each of which a four-digit code number was assigned. The classification system also provides broader groups of industries, with twenty three-digit groups and five two-digit groups. Within industries, the system provides for seven-digit products and five-digit product classes. Products are considered primary to an industry if the first four digits of the product codes are the same as the industry code. Products whose first four code numbers differ from the industry code are called secondary products. To determine the industry classification of an establishment, the seven-digit products are grouped together according to the first four digits of the product code. The first four digits of the group of products with the largest value of production become the industry code for the establishment. (For mineral service industries, the classification is on the basis of receipts for services performed.)

In most industries, establishments making products falling into the same industry category use a variety of processes. Separate statistics are provided on the various types of operation. Whenever possible, separate figures are shown for establishments with mines only, mines with preparation plants, and preparation plants only. Separate figures are provided by type of mine (underground, open pit, and combination). Separate statistics also are provided on producing and nonproducing operations, an establishment being defined as nonproducing if no mineral products were shipped during the year.

Statistics also are usually provided on the production of minerals mined and used in the same establishment for producing prepared minerals or used at the producing establishment for fuel.

Differences in the integration of production processes and types of operation should be considered when relating the general items (employment, payrolls, value added, etc.) to the product and material data.

Value of Shipments for the Industry Compared With Value of Product Shipments

In census of mineral industries publications, value of shipments data are published for industries and products. Value of shipments and receipts data shown in tables 1 through 4 represent the total value of shipments and receipts of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in table 6 represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining establishments regardless of their industry classification. Value of product shipments also may include some products shipped from mining operations associated with manufacturing establishments.

CENSUS DISCLOSURE RULES

The Bureau of the Census is prohibited by Federal law from publishing any statistics that disclose information reported by individual companies. However, the number of companies classified in a specific industry is not considered a disclosure, so this item may be given even though other information is withheld.

The disclosure analysis for the industry statistics in tables 1-4 of this report is based on the total value of shipments and receipts and capital expenditures. Whenever the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line has been suppressed. If capital expenditures alone is a disclosure, only total capital expenditures and cost of supplies statistics are suppressed. However, the suppressed data are included in higher level totals.

MICROFICHE

All data in the final reports and volume are available on microfiche. Microfiche reports are sold by the Superintendent

of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

SPECIAL TABULATIONS

Public-use tapes are not available for 1982 Census of Mineral Industries data. However, special tabulations of data collected may be obtained on computer tape or in tabular form. The data will be in summary form and subject to the same rules prohibiting disclosure of confidential information (such as name, address, kind of business, or other data for individual business establishments or companies) as are the regular publications. Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief, Industry Division, Bureau of the Census, Washington, D.C. 20233.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in this publication:

- Represents zero.
- (D) Withheld to avoid disclosing data for individual companies.
- (NA) Not available.
- (S) Withheld because estimate did not meet publication standards on the basis of either the response rate or a consistency review.
- (X) Not applicable.
- (Z) Less than half the unit shown.
- n.e.c. Not elsewhere classified.
- n.s.k. Not specified by kind.
- r Revised.
- SIC Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, and bbl, are used in the customary sense. Where the term "tons" only is used, it refers to short tons of 2,000 pounds; where the figures are expressed in tons of 2,240 pounds, the unit of measure is specified as "long tons" or "l. tons."

Users' Guide for Locating Statistics in This Report by Table Number

[For explanation of terms, see appendix]

Item	Industry and historical	Industry by State	Industry by type of operation	Industry by employ- ment size	Industry- product analysis	Detailed product shipments by State	Detailed supplies consumed by industry
Number of operating companies	1						
Establishments:							
Total number	1	2,3a	2,3b	4			
Employment size	1	2,3a	2,3b	4			
Employment and payroll:							
Number of employees	1	2,3a	2,3b	4			
Payroll	1	2,3a	2,3b	4			
Production, development, and exploration—							
Workers	1	2,'3a	2,'3b	4			
Hours	1	2,'3a	2,'3b	4			
Wages	1	2,3a	2,3b	4			
Supplemental labor costs		'3a	'3b				
Value added, cost of supplies, ship- ments, and inventories:							
Value added by mining	1	2,3a	2,3b	4			
Cost of supplies	1	2,3a	2,3b	4			'7a
Resales, cost and value		3a	3b				
Purchased fuels consumed		3a	3b				'7b
End-of-year fuels stocks							'7b
Purchased electricity		'3a	'3b				
Cost of contract work		3a	3b				
Industry shipments and receipts	1	2,3a	2,3b	4	'5		
Value of net shipments	1				'5		
Product shipments						6	
Inventories	3c						
Gross book value of depreciable or depletable assets, beginning and end of year; depreciation and depletion charges for year:							
Buildings and structures, except land		3a	3b				
Machinery and equipment		3a	3b				
Mineral exploration and development		3a	3b				
Mineral land and rights		3a	3b				
New and used capital expenditures, excluding land and rights:							
Total	1	2,3a	2,3b	4			
Buildings and structures		3a	3b				
Machinery and equipment		3a	3b				
Mineral exploration and development		3a	3b				
Capitalized mineral land and rights . . .		3a	3b				
Rental payments		'3a	'3b				
Expensed mineral exploration, develop- ment, land, and rights		'3a	'3b				

'Detailed information shown.

Coal Mining

CONTENTS

[Page numbers listed here omit the prefix that appears as part of the number of each page]

	Page
Introduction	III
Users' Guide in Locating Statistics in This Report by Table Number	VII
Description of Industries and Summary of Findings	2

TABLES

INDUSTRY STATISTICS

1. Historical Industry Statistics: 1982 and Earlier Census Years	5
2. Industry Statistics for Selected States and Type of Operation: 1982 and 1977	5
3a. Summary Statistics by Industry for Selected States: 1982	7
3b. Summary Statistics by Industry and Type of Operation: 1982	10
3c. Inventories by Industry: End of 1981 and 1982	12
4. Industry Statistics by Employment Size of Establishment: 1982	12

PRODUCT STATISTICS

5. Industry-Product Analysis—Summary of Industry Shipments and Receipts and Net Shipments of Primary Products: 1982 and 1977	13
6a. Products or Services for Selected States: 1982 and 1977	13
6b. Net Production of Coal by Type of Mining for Selected States: 1982	17

MATERIALS STATISTICS

7a. Selected Supplies, Minerals Received for Preparation, and Purchased Machinery Installed: 1982 and 1977	17
7b. Fuels Consumed by Type, 1982 and 1977, and End-of-Year Fuel Stocks, 1982	19

APPENDIX

Explanation of Terms	A-1
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Publication Program	Inside back cover
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DESCRIPTION OF INDUSTRIES AND SUMMARY OF FINDINGS

COAL MINING

This report shows 1982 Census of Mineral Industries statistics for establishments classified in each of the following industries:

SIC Code and Title

1111	Anthracite
1112	Anthracite Mining Services
1211	Bituminous Coal and Lignite
1213	Bituminous Coal and Lignite Mining Services

Industry statistics (employment, payroll, value of shipments, cost of supplies, etc.) are reported for each establishment as a whole. Aggregates of such data for an industry reflect not only the primary activities of the establishments, but also all secondary activities performed by the same establishments. This fact should be taken into account in comparing industry statistics (tables 1 through 4 and 7) with product statistics (table 6) showing shipments by all industries of the primary products of the specified industry. The extent of the "product mix" is indicated in table 5, which shows the value of primary and secondary products shipped by establishments classified in the specified industry and also the value of net shipments of primary products of the industry produced as secondary products by establishments classified in other industries.

Small single-unit companies with up to 20 employees (the cutoff varied by industry) were excluded from the mail portion of the census. For these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated), data on payrolls and receipts were obtained from administrative records of other government agencies. This information was used in conjunction with industry averages and other information to develop estimates for all statistics. The first column in tables 2 and 4 provides an indication of the extent that these establishments account for the figures shown.

Establishment data were tabulated based on industry definitions contained in the 1972 Standard Industrial Classification Manual and its 1977 supplement.¹

All dollar figures shown in this report are in current dollars for the year specified and have not been adjusted for changes in price levels. Therefore, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

¹Standard Industrial Classification Manual: 1972. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Stock No. 041-001-00066-6. 1977 Supplement. Stock No. 003-005-00176-0.

INDUSTRY 1111, ANTHRACITE

The industry includes establishments primarily engaged in mining or otherwise preparing anthracite (hard coal). All establishments in the United States that are classified in this industry are in Pennsylvania. Associated activities such as mechanical cleaning, crushing, screening, and sizing are also included. The total value of shipments and receipts for the industry was \$287 million in 1982. The value added by mining was \$172 million. Total employment for the industry increased to 3.4 thousand employees in 1982, from 3.3 thousand in 1977. Value added per employee was \$50.5 thousand in 1982; in 1977, it was \$35.2 thousand.

Establishments of single-unit companies in this industry with up to 4 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were imputed as described above. These establishments accounted for 9 percent of total value of shipments and receipts.

INDUSTRY 1112, ANTHRACITE MINING SERVICES

The industry includes establishments primarily engaged in performing for others, on a contract, fee, or other basis, anthracite mining services, such as the removal of overburden, strip or culm bank mining, drilling, mine tunneling, shaft sinking, and pumping or draining mines. The total value of shipments and receipts for the industry was \$7 million in 1982. The value added by mining was \$5 million in 1982. Total employment for the industry decreased to .1 thousand employees in 1982, from .3 thousand in 1977. Value added per employee was \$47.0 thousand in 1982; in 1977, it was \$23.7 thousand.

Establishments of single-unit companies in this industry with up to 4 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were imputed as described above. These establishments accounted for 64 percent of total value of shipments and receipts.

INDUSTRY 1211, BITUMINOUS COAL AND LIGNITE

This industry represents establishments primarily engaged in producing bituminous coal, lignite, or in developing bituminous coal or lignite mines. This industry includes underground mining, auger mining, strip mining, culm bank mining, and coal cleaning, crushing, screening, and sizing plants, whether or not operated in conjunction with the mines served. The total value of shipments and receipts for the industry was \$27,695 million in 1982.

Net shipments (excluding coal, not specified by kind) of bituminous coal and lignite in 1982 amounted to 759 million tons, an increase of 19 percent over the 1977 net shipments figure of 636 million tons. The amount of coal mined and consumed at the same establishment for heat and power was .2 million tons in 1982 and .3 million tons in 1977. Value added by mining was \$18,041 million in 1982. Total employment for the industry increased to 240.9 thousand employees in 1982, from 235.2 thousand in 1977. Value added per employee was \$74.9 thousand in 1982; in 1977, it was \$46.1 thousand.

Establishments of single-unit companies in this industry with up to 6 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were imputed as described above. These establishments accounted for 10 percent of total value of shipments and receipts.

INDUSTRY 1213, BITUMINOUS COAL AND LIGNITE MINING SERVICES

The industry includes establishments primarily engaged in performing for others, on a contract, fee, or other basis, bituminous coal and lignite mining services, such as the removal of overburden, strip and auger mining, drilling, shaft sinking, and mine tunneling. The total value of shipments and receipts for the industry was \$565 million in 1982. The value added by mining was \$414 million. Total employment for the industry increased to 6.8 thousand employees in 1982, from 6.5 thousand in 1977. Value added per employee was \$60.7 thousand in 1982; in 1977, it was \$47.1 thousand.

Establishments of single-unit companies in this industry with up to 4 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were imputed as described above. These establishments accounted for 15 percent of total value of shipments and receipts.

GEOGRAPHIC STATISTICS FOR SERVICE INDUSTRIES

Each company that supplied anthracite, bituminous, and lignite mining services was required to submit one report covering all such activities it performed in the United States. Each report contained an inquiry requesting, by State and county for 1982, the receipts for services performed for others. Industry statistics, by county, were completed for each company by allocating the reported totals on the basis of the reported receipts for services figures. These county figures were then used to develop industry statistics for States.

COMPARABILITY WITH DEPARTMENT OF ENERGY STATISTICS

The Bureau of the Census statistics on products for industries 1111 and 1211 are not entirely comparable with product statistics for the same industries published by the Department

of Energy. The differences that occur result primarily from differences in data collection methods, coverage, and objectives sought. For example:

ANTHRACITE INDUSTRY (SIC 1111)

1. The Department of Energy excludes all mines having an output of less than 10,000 tons a year, whereas the Bureau of the Census excludes single-unit establishments with no paid employees. This methodology tends to understate the contributions to products of such operations that use contract labor.
2. Both agencies collect information on raw coal shipped for preparation, as well as on the prepared product from such coal. Also, both agencies collect information on raw coal shipped to public utility, manufacturing, and other industrial plants. While such statistics are published separately by the Bureau of the Census, the Department of Energy publishes only the final product and includes the raw coal shipped for use outside the anthracite industry in its figures for breaker, washery, and dredge product.

BITUMINOUS COAL AND LIGNITE MINING INDUSTRY (SIC 1211)

1. The Department of Energy excludes all mines having an output of less than 10,000 tons a year, whereas the Bureau of the Census excludes only single-unit establishments without paid employees. However, the contribution to products of such excluded establishments is usually small.
2. The Department of Energy statistics on both production and shipments are based primarily on data furnished by producers. These data are supplemented, however, by data from various State mine department records in order to obtain coverage of production not directly reported. The Department of Energy figures represent the quantity and value of net marketable coal produced (i.e., excluding washery and other refuse) and are shown by States and counties from which the coal originated. The Census Bureau statistics are on an establishment basis and take into account the actual location and type of product of the establishment as reported by the respondent making a distinction between "net production" and "net shipments." The Department of Energy statistics, therefore, are comparable by State and county only with the Bureau of the Census statistics for net production and are not comparable with the Bureau of the Census State and county figures for net shipments.
3. Both the Department of Energy and the Bureau of the Census collected information on mechanical cleaning of coal. However, the Department of Energy credits the clean coal to the location or locations at which the coal was mined, whereas the Bureau of the Census statistics show the clean coal shipped according to the location of the cleaning plant. Both the Bureau of the Census and Department of Energy clean-coal statistics represent mechanical cleaning at plants operated in conjunction with mines and at separately operated cleaning

plants (these are included in the Bituminous Coal and Lignite Industry) and exclude figures for coal cleaning at preparation plants operated as parts of coke ovens or other manufacturing establishments. Both agencies obtain information on mechanical crushing and the Bureau of the Census, in addition, obtains data for screening and sizing. The Department of Energy figures for mechanical crushing show all coal crushed at mines, including that which was both crushed and mechanically cleaned. The Bureau of the Census figures

represent coal prepared only by mechanical crushing, screening, and sizing.

4. The Bureau of the Census collects information on coal purchased and resold without further processing. Data for such resales are not collected by the Department of Energy. For industry 1211, the Bureau of the Census figures show purchased cost of such resales at \$282.1 million and the value of such resales at \$330.1 million.

Table 1. Historical Industry Statistics: 1982 and Earlier Census Years

[For meaning of abbreviations and symbols, see Introductory text. For explanation of terms, see appendix]

Year	Companies (number)	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Value of net ship- ments and receipts ¹ (million dollars)	Quantity of primary products ²	Capital expendi- tures (million dollars)
		Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						
INDUSTRY 1111, ANTHRACITE														
1982 ³	128	152	40	3.4	66.9	2.9	5.5	55.7	171.7	137.7	286.6	(D)	4.1	22.9
1977 ³	127	156	38	3.3	47.5	2.7	5.4	38.0	116.0	109.6	217.0	(D)	5.0	6.6
1972 ³	(NA)	213	41	4.0	31.9	3.4	6.6	26.6	62.9	65.7	122.6	(D)	7.1	5.6
1967 ³	(NA)	371	58	6.4	36.6	5.5	10.3	30.9	74.7	76.4	148.0	100.6	11.6	5.0
1963	987	1 026	65	10.7	53.0	9.3	17.6	44.9	110.5	123.1	221.0	156.5	16.4	12.7
1958	1 075	1 163	117	18.7	79.5	17.3	26.4	67.4	142.2	160.9	290.3	199.2	22.3	12.6
INDUSTRY 1112, ANTHRACITE MINING SERVICES														
1982 ³	21	21	1	.1	2.1	.1	.2	1.7	4.7	2.5	6.7	6.7	(*)	.5
1977 ³	20	20	5	.3	3.5	.2	.4	3.2	7.1	4.1	10.2	10.2	(*)	1.0
1972 ³	(NA)	17	10	.5	3.4	.4	.9	3.0	5.5	2.4	7.0	7.0	(*)	.9
1967 ³	(NA)	32	11	.6	4.5	.7	1.3	4.1	7.4	3.9	9.9	9.7	(*)	1.4
1963	41	43	17	1.1	5.6	1.0	1.6	5.0	10.0	6.0	15.5	15.5	(*)	2.5
1958	64	65	42	3.1	13.9	2.6	4.5	12.0	22.3	16.3	34.6	34.6	(*)	3.6
INDUSTRY 1211, BITUMINOUS COAL AND LIGNITE														
1982 ³	3 493	4 513	1 767	240.9	6 570.1	192.6	389.5	5 055.6	16 041.2	12 795.5	27 695.4	23 849.7	770.5	3 141.3
1977 ³	(NA)	4 944	1 610	235.2	4 004.5	198.0	358.2	3 203.2	10 837.1	6 228.7	16 301.1	13 616.4	651.6	2 764.7
1972 ³	(NA)	3 191	1 076	152.2	1 713.7	129.6	258.5	1 412.2	3 625.7	2 374.6	5 312.6	4 648.1	581.0	687.5
1967 ³	(NA)	3 966	1 036	123.0	915.6	107.6	209.6	767.3	1 987.5	1 258.9	2 915.4	2 598.5	551.7	331.0
1963	5 663	6 174	1 150	132.5	755.3	117.4	215.3	644.5	1 589.9	998.0	2 372.4	2 077.2	464.0	215.4
1958	6 112	6 783	1 354	166.4	907.6	162.3	265.6	755.6	1 600.6	994.3	2 409.3	2 076.9	417.7	165.7
INDUSTRY 1213, BITUMINOUS COAL AND LIGNITE MINING SERVICES														
1982 ³	347	5492	589	6.6	166.1	5.6	10.6	132.0	413.5	209.7	565.3	565.3	(*)	57.9
1977 ³	(NA)	331	80	6.5	115.4	5.6	11.2	99.5	306.2	150.5	407.4	(D)	(*)	49.3
1972 ³	(NA)	174	42	2.9	28.6	2.6	4.9	24.3	59.7	31.3	61.6	61.6	(*)	9.4
1967 ³	(NA)	115	20	1.4	10.4	1.3	2.6	9.5	21.7	10.9	29.3	29.2	(*)	3.3
1963	(NA)	131	17	1.3	7.0	1.2	2.3	6.4	16.6	10.1	24.0	23.6	(*)	2.9
1958	(NA)	157	21	1.5	7.3	1.4	2.5	6.5	15.1	9.3	21.6	21.6	(*)	2.6

Note: For data prior to 1958, see 1963 Census of Mineral Industries, volume I, table 1 of Industry chapter.

¹Value of gross shipments less value of crude minerals transferred to other establishments for preparation and value of resales. For service industries, represents total receipts less value of resales.

²Represents clean coal equivalent of all coal mined, including coal produced and used at the same establishment for heat and power in millions of short tons.

³Beginning with 1987, data for single-unit establishments without paid employees were excluded from the census.

⁴Coal mined by the coal mining services industry is included in production shown in the coal mining industry.

⁵Data for 1982 are not comparable to prior years. In 1982, service companies were requested to submit one report for all mining services performed in the United States. For such reports, receipts for services performed were requested by county. Establishment figures for 1982 represent sum of number of counties specified in each report.

Table 2. Industry Statistics for Selected States and Type of Operation: 1982 and 1977

[For meaning of abbreviations and symbols, see Introductory text. For explanation of terms, see appendix]

Industry, geographic area, and type of operation	1982											1977		
	E ¹	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expenditures (million dollars)	All employees ² (1,000)	Value added by mining (million dollars)
		Total (number)	With 20 employees or more (number)	Number ² (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						
INDUSTRY 1111, ANTHRACITE														
Geographic Area														
United States -----	-	152	40	3.4	66.9	2.9	5.5	55.7	171.7	137.7	286.6	22.9	3.3	116.0
Pennsylvania -----	-	152	40	3.4	66.9	2.9	5.5	55.7	171.7	137.7	286.6	22.9	3.3	116.0
Type of Operation														
Producing establishments -----	-	148	40	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	3.3	116.0
Mines only -----	E4	101	15	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.9	33.2
Underground -----	E7	64	6	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.2	6.5
Open pit -----	-	14	6	.5	6.3	.4	.7	7.7	17.7	11.3	27.7	1.3	.6	19.1
Mines with preparation plants -----	-	26	16	1.9	41.4	1.7	3.5	35.1	109.2	64.6	164.7	9.4	1.6	69.4
Open pit -----	-	6	5	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Combination and other mining methods -----	-	19	13	1.6	35.1	1.4	2.9	29.5	86.0	53.1	132.4	6.7	1.4	50.2
Separately operated preparation plants -----	-	16	5	.3	6.4	.2	.4	4.6	16.9	43.2	59.6	.5	BB	13.4
Undistributed ³ -----	-	3	2	AA	(D)	-	-	-	-	-	-	-	AA	-

See footnotes at end of table.

Table 2. Industry Statistics for Selected States and Type of Operation: 1982 and 1977—Con.

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Industry, geographic area, and type of operation	E ¹	1982											1977	
		Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expenditures (million dollars)	All employees ² (1,000)	Value added by mining (million dollars)
		Total (number)	With 20 employees or more (number)	Number ² (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						
INDUSTRY 1112, ANTHRACITE MINING SERVICES														
Geographic Area														
United States	E6	21	1	.1	2.1	.1	.2	1.7	4.7	2.5	8.7	.5	.3	7.1
Pennsylvania	E8	21	1	.1	2.1	.1	.2	1.7	4.7	2.5	8.7	.5	.3	7.1
INDUSTRY 1211, BITUMINOUS COAL AND LIGNITE														
Geographic Area														
United States	E1	4 513	1 787	240.9	8 570.1	192.8	369.5	5 055.8	18 041.2	12 795.5	27 895.4	3 141.3	235.2	10 837.1
Alabama	-	146	65	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	10.6	456.0
Alaska	-	1	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Arizona	-	11	5	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
Arkansas	E6	13	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
California	-	11	1	BB	(D)	-	-	-	-	-	-	-	(NA)	(NA)
Colorado	-	85	44	7.0	215.7	3.7	6.9	102.8	357.2	161.2	424.0	94.4	3.0	137.9
Illinois	-	110	79	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	15.9	686.6
Indiana	-	95	46	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	4.7	228.7
Iowa	-	10	3	.1	2.5	.1	.3	2.0	9.8	10.0	19.1	.7	AA	(D)
Kansas	E1	13	8	.4	10.5	.3	.6	8.6	27.1	11.1	35.3	2.9	BB	(D)
Kentucky	E1	1 252	429	46.8	1 233.7	39.4	76.8	1 011.5	3 497.0	2 917.1	5 867.9	546.2	42.3	2 249.1
Maryland	E1	33	5	1.0	26.0	.8	1.8	21.2	67.7	(D)	95.5	(D)	.5	29.6
Missouri	-	30	12	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Montana	-	11	4	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
New Mexico	-	12	6	2.1	62.6	1.6	3.5	48.3	330.0	(D)	369.4	(D)	EE	(D)
North Dakota	-	14	11	EE	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
Ohio	-	208	92	13.0	365.0	10.7	21.2	292.8	986.9	707.9	1 550.9	144.0	16.6	686.3
Oklahoma	E1	37	19	1.2	32.5	1.0	2.1	25.4	98.2	52.9	133.1	18.0	EE	(D)
Oregon	-	2	1	BB	(D)	-	-	-	-	-	-	-	AA	(D)
Pennsylvania	-	597	216	31.7	830.9	26.1	48.2	655.4	1 927.1	1 541.9	3 165.3	303.6	37.8	1 650.0
Tennessee	E2	215	53	3.9	89.1	3.3	8.2	72.9	213.6	192.3	371.3	34.7	4.0	210.0
Texas	-	38	16	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	EE	(D)
Utah	E1	23	18	5.3	143.9	4.3	7.9	111.2	370.2	(D)	518.6	(D)	3.4	178.2
Virginia	E1	618	198	19.8	447.2	15.9	28.3	351.8	1 234.8	1 355.9	2 370.4	220.3	18.9	870.8
Washington	-	6	1	CC	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	CC	(D)
West Virginia	E1	798	396	54.3	1 495.8	45.3	87.6	1 218.7	3 874.9	2 694.1	5 928.6	640.4	64.4	2 544.6
Wyoming	-	37	27	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.8	344.5
Type of Operation														
Producing establishments	E1	4 384	1 749	239.7	8 538.1	192.0	368.0	5 038.1	17 986.0	12 743.1	27 695.4	3 033.6	234.1	10 780.1
Mines only	E3	3 259	908	78.5	1 872.9	87.7	122.0	1 553.8	5 203.5	2 586.8	6 942.3	848.0	71.9	3 292.0
Underground	E4	2 894	707	62.5	1 452.4	54.0	94.3	1 200.2	3 761.6	1 725.4	4 864.2	622.9	52.8	2 127.8
Open pit	-	321	170	12.3	328.8	10.4	21.8	276.0	1 140.4	682.1	1 637.4	185.1	14.9	926.2
Combination and other mining methods	E3	44	31	3.7	91.7	3.3	5.9	77.5	301.5	179.3	440.7	40.1	4.3	238.0
Mines with preparation plants	-	777	641	142.5	4 096.0	120.7	238.9	3 390.8	12 422.6	7 544.1	17 858.7	2 108.0	149.7	7 181.0
Underground	-	339	280	83.3	2 289.7	72.1	136.1	1 926.4	5 912.8	3 219.5	8 061.9	1 070.2	92.5	3 709.2
Open pit	-	334	267	39.8	1 238.6	32.0	68.5	988.3	4 766.1	2 766.5	6 710.3	822.2	29.1	2 083.0
Combination and other mining methods	-	104	64	19.5	567.6	18.6	34.3	476.1	1 744.0	1 558.1	3 086.5	215.6	28.0	1 388.7
Separately operated preparation plants	-	112	68	4.4	115.3	3.7	7.1	93.5	359.8	2 612.1	2 894.4	77.5	3.3	307.2
Undistributed ³	-	236	132	14.2	453.9	-	-	-	-	-	-	-	9.2	-
Nonproducing establishments	-	129	18	1.3	32.1	.7	1.5	17.6	55.3	52.5	-	107.7	1.1	57.0
INDUSTRY 1213, BITUMINOUS COAL AND LIGNITE MINING SERVICES														
Geographic Area														
United States	E1	492	89	6.8	166.1	5.8	10.8	132.0	413.5	209.7	565.3	57.9	6.5	306.2
Illinois	-	7	3	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(Z)	2.0
Indiana	-	8	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.1	3.4
Kentucky	E2	91	18	1.1	24.8	1.0	1.9	22.1	73.2	31.4	93.5	11.1	.8	35.5
Montana	-	5	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Ohio	-	55	9	.5	15.0	.5	1.0	11.7	36.5	21.4	53.2	4.6	.8	35.0
Oklahoma	E1	11	3	.3	7.1	.2	.5	6.2	13.7	10.3	22.4	1.6	(NA)	(NA)
Pennsylvania	E2	78	8	.6	12.8	.5	1.0	10.6	30.6	13.2	41.3	2.4	1.1	53.6
Texas	-	10	1	AA	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Virginia	E2	58	16	.9	20.2	.8	1.4	17.5	50.0	22.5	64.9	7.8	.6	26.5
West Virginia	E1	83	20	1.3	32.2	1.1	2.0	26.0	70.9	33.0	97.2	8.7	1.1	49.0
Wyoming	-	12	3	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.7	32.4

¹Some payroll and sales data for small single-unit companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of figures shown: E1—10 to 19 percent; E2—20 to 29 percent; E3—30 to 39 percent; E4—40 to 49 percent; E5—50 to 59 percent; E6—60 to 69 percent; E7—70 to 79 percent; E8—80 to 89 percent; E9—90 percent or more.

²Data lines with less than 100 employees are not shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 100 or more, number of establishments is shown and employment size range is indicated by one of the following symbols: AA—100 to 249 employees; BB—250 to 499 employees; CC—500 to 999 employees; EE—1,000 to 2,499 employees; FF—2,500 employees or more.

³Includes data for separately operated auxiliary establishments which were not classified by type of operation.

Table 3a. Summary Statistics by Industry for Selected States: 1982

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Item	Industry 1111, Anthracite		Industry 1112, Anthracite Mining Services		Industry 1211, Bituminous Coal and Lignite			
	United States	Pennsylvania	United States	Pennsylvania	United States	Colorado	Kansas	Kentucky
Establishments during year ----- number ..	152	152	21	21	4 513	65	13	1 252
With 0 to 19 employees ----- do ..	112	112	20	20	2 746	41	5	823
With 20 to 99 employees ----- do ..	34	34	1	1	1 215	27	7	332
With 100 employees or more ----- do ..	6	6	-	-	552	17	1	97
All employees:								
Average for year ----- 1,000 ..	3.4	3.4	.1	.1	240.9	7.0	.4	46.8
Payroll for year ----- mil. dol ..	66.9	66.9	2.1	2.1	6 570.1	215.7	10.5	1 233.7
Production, development, and exploration workers:								
Average for year ----- 1,000 ..	2.9	2.9	.1	.1	192.8	3.7	.3	39.4
March ----- do ..	3.0	3.0	.1	.1	206.6	4.0	.3	42.0
May ----- do ..	2.9	2.9	.1	.1	200.1	3.9	.4	40.8
August ----- do ..	2.7	2.7	.1	.1	189.6	3.5	.3	38.5
November ----- do ..	2.8	2.6	.1	.1	175.1	3.2	.3	36.4
Hours ----- millions ..	5.5	5.5	.2	.2	369.5	6.9	.6	76.8
January to March ----- do ..	1.3	1.3	.1	.1	104.9	2.0	.1	21.6
April to June ----- do ..	1.3	1.3	.1	.1	97.3	1.9	.1	20.0
July to September ----- do ..	1.3	1.3	.1	.1	66.6	1.6	.2	16.0
October to December ----- do ..	1.5	1.5	.1	.1	80.5	1.5	.2	17.1
Wages ----- mil. dol ..	55.7	55.7	1.7	1.7	5 055.6	102.6	6.6	1 011.5
Supplemental labor costs not included in payroll ----- do ..	23.4	23.4	.5	.5	2 706.1	43.3	2.2	470.3
Legally required expenditures, including Social Security contributions ----- do ..	17.3	17.3	.4	.4	1 132.6	21.4	1.6	211.0
Payments for voluntary programs ----- do ..	6.1	6.1	.1	.1	1 573.5	21.9	.6	259.3
Value added by mining ----- do ..	171.7	171.7	4.7	4.7	16 041.2	357.2	27.1	3 497.0
Cost of supplies ----- do ..	137.7	137.7	2.5	2.5	12 795.5	161.2	11.1	2 917.1
Supplies used, minerals received, and purchased machinery installed ----- do ..	107.1	107.1	1.5	1.5	9 402.6	116.9	7.2	2 185.2
Resales ----- do ..	(D)	(D)	-	-	262.1	(D)	(D)	95.1
Purchased fuels consumed ----- do ..	11.0	11.0	.3	.3	613.0	13.7	2.3	116.6
Purchased electric energy:								
Quantity ----- mil. kWh ..	189.8	169.8	5.3	5.3	14 363.3	264.9	11.4	2 436.2
Cost ----- mil. dol ..	9.2	9.2	.3	.3	576.1	13.2	.5	90.9
Electric energy generated less sold ----- mil. kWh ..	-	-	-	-	(D)	.1	-	5.5
Contract work ----- mil. dol ..	(D)	(D)	.5	.5	1 919.5	(D)	(D)	427.3
Cost of purchased communication services ----- do ..	.2	.2	(Z)	(Z)	21.5	.8	(Z)	4.3
Value of shipments and receipts ----- do ..	266.6	286.6	6.7	6.7	27 695.4	424.0	35.3	5 867.9
Value of resales ----- do ..	(D)	(D)	-	-	330.1	(D)	(D)	103.7
Hours worked by production, development, and exploration workers ----- millions ..	5.5	5.5	.2	.2	369.5	6.9	.6	76.8
At mines ----- do ..	3.7	3.7	(Z)	(Z)	287.0	5.9	.4	54.3
Underground ----- do ..	.5	.5	(Z)	(Z)	174.6	3.5	-	32.2
Open pit ----- do ..	2.6	2.6	(Z)	(Z)	83.5	1.9	.4	16.9
Surface, including mine shops and yards ----- do ..	.4	.4	(Z)	(Z)	26.7	.5	(Z)	5.2
At preparation plants ----- do ..	1.1	1.1	(Z)	(Z)	32.8	.4	(Z)	6.2
Hours worked, n.s.k. ----- do ..	.7	.7	(Z)	(Z)	49.8	.6	.2	16.3
Hours worked on exploration and development (included above) ----- do ..	.8	.6	(NA)	(NA)	3.4	.2	-	1.4
Gross book value of depreciable assets (usually original cost) at beginning of year ----- mil. dol ..	179.0	179.0	6.6	6.6	24 004.0	830.0	43.9	4 213.1
Buildings and other structures, except land ----- do ..	22.1	22.1	.7	.7	3 231.7	80.9	1.6	478.6
Machinery and equipment ----- do ..	138.8	138.8	6.0	6.0	16 442.3	499.2	36.4	2 896.8
Mineral exploration and development ----- do ..	1.5	1.5	(NA)	(NA)	2 071.5	60.4	.6	305.0
Mineral land and rights ----- do ..	16.7	16.7	(NA)	(NA)	2 258.6	169.5	5.2	532.8
Capital expenditures during year (except land and mineral rights) ----- do ..	22.9	22.9	.5	.5	3 141.3	94.4	2.9	546.2
New capital expenditures during year ----- do ..	14.4	14.4	.2	.2	2 493.4	74.1	2.7	423.0
Buildings and other structures, except land ----- do ..	1.1	1.1	(Z)	(Z)	396.2	19.6	.1	49.8
Machinery and equipment ----- do ..	13.3	13.3	.2	.2	2 097.3	54.5	2.6	373.3
Used capital expenditures during year ----- do ..	(D)	(D)	.2	.2	332.9	3.5	.1	70.2
Buildings and other structures, except land ----- do ..	.1	.1	-	-	37.3	.2	-	1.2
Machinery and equipment ----- do ..	(D)	(D)	.2	.2	295.6	3.3	.1	69.0
Mineral exploration and development ----- do ..	(D)	(D)	(NA)	(NA)	315.0	16.8	.1	53.0
Capitalized mineral land and rights ----- do ..	.2	.2	(NA)	(NA)	112.6	6.5	.1	20.3
Deductions from depreciable assets during year ----- do ..	9.8	9.8	.1	.1	1 254.8	29.3	3.3	323.9
Buildings and other structures, except land ----- do ..	.4	.4	(Z)	(Z)	80.2	2.9	(Z)	9.2
Machinery and equipment ----- do ..	(D)	(D)	.1	.1	1 070.4	19.8	2.3	276.5
Mineral exploration and development ----- do ..	(D)	(D)	(NA)	(NA)	70.8	3.7	.1	21.7
Mineral land and rights ----- do ..	.1	.1	(NA)	(NA)	53.4	3.0	.9	14.5
Depreciation and depletion charges for year ----- do ..	15.9	15.9	.5	.5	2 094.6	57.3	4.1	343.5
Buildings and other structures, except land ----- do ..	1.3	1.3	(Z)	(Z)	163.3	4.5	.1	25.9
Machinery and equipment ----- do ..	13.1	13.1	.5	.5	1 724.1	43.5	3.9	279.7
Mineral exploration and development ----- do ..	.6	.6	(NA)	(NA)	109.5	4.4	(Z)	15.4
Mineral land and rights ----- do ..	.9	.9	(NA)	(NA)	97.7	4.9	.1	22.6
Gross book value of depreciable assets at end of year ----- do ..	192.3	192.3	7.0	7.0	26 003.0	901.5	43.5	4 455.7
Buildings and other structures, except land ----- do ..	22.9	22.9	.6	.6	3 605.0	97.8	1.9	520.4
Machinery and equipment ----- do ..	145.3	145.3	6.4	6.4	17 764.8	537.2	36.7	3 060.6
Mineral exploration and development ----- do ..	7.4	7.4	(NA)	(NA)	2 315.7	73.5	.6	336.3
Mineral land and rights ----- do ..	16.8	16.8	(NA)	(NA)	2 317.7	193.0	4.4	536.5
Rental payments during year ----- do ..	5.0	5.0	.1	.1	306.1	7.3	.2	65.4
Buildings and other structures, except land ----- do ..	.3	.3	(Z)	(Z)	25.1	1.8	-	11.0
Machinery and equipment ----- do ..	4.7	4.7	.1	.1	280.9	5.6	.2	54.4
Lease rents ----- do ..	1.4	1.4	(NA)	(NA)	296.4	1.5	.2	56.5
Expensed mineral exploration, development, land, and rights ----- do ..	(D)	(D)	(NA)	(NA)	917.3	25.5	.1	114.2
Mineral exploration and development ----- do ..	(D)	(D)	(NA)	(NA)	451.5	17.9	(Z)	37.8
Mineral land and rights ----- do ..	.2	.2	(NA)	(NA)	465.6	7.6	.1	76.5

See footnotes at end of table.

Table 3a. Summary Statistics by Industry for Selected States: 1982—Con.

(For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix)

Item	Industry 1211, Bituminous Coal and Lignite—Con.					
	Ohio	Oklahoma	Pennsylvania	Tennessee	Virginia	West Virginia
Establishments during year.....number..	208	37	597	215	618	798
With 0 to 19 employees.....do..	116	18	381	182	420	402
With 20 to 99 employees.....do..	64	16	140	48	157	264
With 100 employees or more.....do..	28	3	76	5	41	132
All employees:						
Average for year.....1,000..	13.0	1.2	31.7	3.9	19.8	54.3
Payroll for year.....mil. dol..	365.0	32.5	830.9	89.1	447.2	1 495.8
Production, development, and exploration workers:						
Average for year.....1,000..	10.7	1.0	26.1	3.3	15.9	45.3
March.....do..	11.1	1.1	28.5	3.4	17.0	50.6
May.....do..	11.2	1.0	28.4	3.5	18.8	47.8
August.....do..	10.7	1.0	25.6	3.3	15.5	44.6
November.....do..	10.0	1.0	23.7	3.1	14.3	38.5
Hours.....millions..	21.2	2.1	48.2	8.2	28.3	87.6
January to March.....do..	5.8	.6	14.0	1.6	8.4	25.8
April to June.....do..	5.6	.6	12.7	1.7	7.8	23.3
July to September.....do..	5.0	.5	11.0	1.5	6.6	20.8
October to December.....do..	4.8	.5	10.4	1.4	5.7	17.8
Wages.....mil. dol..	292.8	25.4	655.4	72.9	351.8	1 218.7
Supplemental labor costs not included in payroll.....do..	151.5	7.9	379.6	27.7	162.8	727.5
Legally required expenditures, including Social Security contributions.....do..	67.1	3.8	176.8	12.0	67.1	321.8
Payments for voluntary programs.....do..	84.4	4.1	203.0	15.7	95.5	405.8
Value added by mining.....do..	988.9	98.2	1 927.1	213.6	1 234.8	3 874.9
Cost of supplies.....do..	707.9	52.9	1 541.9	192.3	1 355.9	2 694.1
Supplies used, minerals received, and purchased machinery installed.....do..	496.6	39.2	1 148.2	159.5	935.1	1 833.9
Resales.....do..	43.0	.8	41.8	2.4	15.8	45.6
Purchased fuels consumed.....do..	49.9	5.9	107.0	7.2	26.1	68.1
Purchased electric energy:						
Quantity.....mil. kWh..	754.4	47.5	1 727.8	130.7	1 048.8	3 208.9
Cost.....mil. dol..	27.5	2.4	75.9	5.7	44.8	124.8
Electric energy generated less sold.....mil. kWh..	-	-	1.1	-	.4	(D)
Contract work.....mil. dol..	91.0	4.7	170.9	17.6	334.3	521.6
Cost of purchased communication services.....do..	1.4	.1	2.3	.1	1.3	4.7
Value of shipments and receipts.....do..	1 550.9	133.1	3 185.3	371.3	2 370.4	5 928.8
Value of resales.....do..	48.4	1.8	43.7	2.4	18.7	57.9
Hours worked by production, development, and exploration workers.....millions..	21.2	2.1	48.2	8.2	28.3	87.8
At mines.....do..	17.2	1.3	40.1	3.8	17.2	69.2
Underground.....do..	8.6	(Z)	24.5	2.6	13.5	58.7
Open pit.....do..	6.8	1.1	12.6	.9	2.3	6.7
Surface, including mine shops and yards.....do..	1.8	.2	3.1	.1	1.3	5.8
At preparation plants.....do..	1.9	.1	4.2	.3	3.3	9.2
Hours worked, n.s.k.....do..	2.1	.6	3.8	2.3	7.8	9.2
Hours worked on exploration and development (included above).....do..	(Z)	-	.3	.1	.1	.2
Gross book value of depreciable assets (usually original cost) at beginning of year.....mil. dol..	1 132.9	133.8	2 792.5	218.7	1 576.9	4 829.9
Buildings and other structures, except land.....do..	214.8	7.7	274.0	16.8	159.6	822.8
Machinery and equipment.....do..	631.7	112.8	2 052.2	182.4	1 186.6	3 095.0
Mineral exploration and development.....do..	184.1	4.1	131.5	8.3	158.3	623.6
Mineral land and rights.....do..	102.4	9.2	334.8	11.4	74.5	288.6
Capital expenditures during year (except land and mineral rights).....do..	144.0	18.0	303.6	34.7	220.3	640.4
New capital expenditures during year.....do..	128.6	11.8	248.7	30.4	182.3	488.2
Buildings and other structures, except land.....do..	39.6	.5	31.7	1.6	10.7	89.3
Machinery and equipment.....do..	89.0	11.3	216.9	28.8	171.8	398.9
Used capital expenditures during year.....do..	11.7	5.6	34.4	2.5	22.8	83.7
Buildings and other structures, except land.....do..	.2	.2	3.2	.1	2.1	28.1
Machinery and equipment.....do..	11.5	5.4	31.2	2.5	20.7	65.7
Mineral exploration and development.....do..	3.7	.7	20.5	1.8	15.2	58.5
Capitalized mineral land and rights.....do..	4.5	.9	10.0	1.5	5.0	11.9
Deductions from depreciable assets during year.....do..	50.6	12.2	118.4	33.7	123.7	271.9
Buildings and other structures, except land.....do..	.8	.1	2.2	1.2	2.0	36.8
Machinery and equipment.....do..	45.1	10.6	103.7	29.8	108.8	211.3
Mineral exploration and development.....do..	1.6	.7	5.0	1.6	9.7	15.7
Mineral land and rights.....do..	3.1	.7	7.5	1.1	5.3	8.4
Depreciation and depletion charges for year.....do..	70.8	13.8	240.6	23.8	148.1	377.8
Buildings and other structures, except land.....do..	9.2	.6	18.0	1.2	12.9	43.0
Machinery and equipment.....do..	54.0	12.3	196.9	21.2	120.4	298.5
Mineral exploration and development.....do..	4.5	.2	5.9	.6	10.5	23.0
Mineral land and rights.....do..	3.1	.6	19.8	.8	4.3	13.1
Gross book value of depreciable assets at end of year.....do..	1 230.8	140.6	2 987.7	221.1	1 678.5	5 210.3
Buildings and other structures, except land.....do..	253.8	6.3	306.7	17.1	170.4	903.6
Machinery and equipment.....do..	687.0	118.9	2 196.7	183.8	1 272.2	3 348.3
Mineral exploration and development.....do..	186.2	4.0	147.0	8.5	161.6	666.3
Mineral land and rights.....do..	103.8	9.4	337.4	11.8	74.2	292.1
Rental payments during year.....do..	54.8	1.4	37.8	.7	17.8	56.2
Buildings and other structures, except land.....do..	2.3	.1	1.4	.1	1.1	4.9
Machinery and equipment.....do..	52.5	1.4	36.3	.8	16.7	51.3
Lease rents.....do..	5.4	.5	49.9	1.6	45.0	55.8
Expensed mineral exploration, development, land, and rights.....do..	220.7	1.4	46.8	11.7	16.7	86.0
Mineral exploration and development.....do..	21.8	.2	22.6	6.8	8.7	34.4
Mineral land and rights.....do..	198.9	1.2	24.2	2.9	8.0	51.6

See footnotes at end of table.

Table 3a. Summary Statistics by Industry for Selected States: 1982—Con.

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Item	Industry 1213, Bituminous Coal and Lignite Mining Services						
	United States	Kentucky	Ohio	Oklahoma	Pennsylvania	Virginia	West Virginia
Establishments during year ----- number	492	91	55	11	78	58	83
With 0 to 19 employees ----- do	403	75	48	8	70	42	83
With 20 to 99 employees ----- do	83	18	9	2	8	16	19
With 100 employees or more ----- do	6	-	-	1	-	-	1
All employees:							
Average for year ----- 1,000	8.6	1.1	.5	.3	.6	.9	1.3
Payroll for year ----- mil. dol.	166.1	24.8	15.0	7.1	12.8	20.2	32.2
Production, development, and exploration workers:							
Average for year ----- 1,000	5.6	1.0	.5	.2	.5	.8	1.1
March ----- do	5.7	1.0	.5	.2	.8	.8	1.1
May ----- do	5.7	1.0	.5	.2	.5	.8	1.1
August ----- do	5.6	1.0	.4	.2	.5	.8	1.2
November ----- do	5.4	.9	.4	.2	.5	.8	1.1
Hours ----- millions	10.8	1.9	1.0	.5	1.0	1.4	2.0
January to March ----- do	2.8	.5	.3	.1	.3	.4	.5
April to June ----- do	2.8	.5	.3	.1	.2	.4	.5
July to September ----- do	2.7	.5	.2	.1	.2	.3	.5
October to December ----- do	2.4	.4	.2	.1	.2	.3	.5
Wages ----- mil. dol.	132.0	22.1	11.7	6.2	10.6	17.5	26.0
Supplemental labor costs not included in payroll ----- do	37.9	4.6	3.5	1.4	4.5	4.5	8.2
Legally required expenditures, including Social Security contributions ----- do	23.7	3.0	2.0	1.1	2.7	2.9	5.3
Payments for voluntary programs ----- do	14.3	1.6	1.5	.4	1.9	1.5	2.9
Value added by mining ----- do	413.5	73.2	36.5	13.7	30.6	50.0	70.9
Cost of supplies ----- do	209.7	31.4	21.4	10.3	13.2	22.5	33.0
Supplies used, minerals received, and purchased machinery installed ----- do	152.1	22.3	13.4	7.0	6.2	16.2	26.0
Resales ----- do	(Z)	-	(Z)	-	(Z)	-	-
Purchased fuels consumed ----- do	35.9	5.5	8.9	1.8	2.7	2.8	4.2
Purchased electric energy:							
Quantity ----- mil. kWh.	156.6	13.3	1.1	4.3	3.7	7.5	36.6
Cost ----- mil. dol.	4.1	.5	.1	.2	.1	.3	.6
Electric energy generated less sold ----- mil. kWh.	(Z)	-	(Z)	-	-	-	-
Contract work ----- mil. dol.	17.5	3.1	.9	1.6	2.1	3.3	2.0
Cost of purchased communication services ----- do	1.2	.1	.1	(Z)	.1	.1	.3
Value of shipments and receipts ----- do	565.3	93.5	53.2	22.4	41.3	64.9	97.2
Value of resales ----- do	(Z)	-	(Z)	-	(Z)	-	-
Hours worked by production, development, and exploration workers ----- millions	10.6	1.9	1.0	.5	1.0	1.4	2.0
At mines ----- do	(?)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Underground ----- do	(?)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Open pit ----- do	(?)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Surface, including mine shops and yards ----- do	(?)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
At preparation plants ----- do	(?)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Hours worked, n.s.k. ----- do	(?)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Hours worked on exploration and development (included above) ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Gross book value of depreciable assets (usually original cost) at beginning of year ----- mil. dol.	345.9	58.5	48.5	7.8	21.8	26.8	50.6
Buildings and other structures, except land ----- do	24.4	6.2	1.9	.1	1.0	.7	2.9
Machinery and equipment ----- do	321.4	52.3	46.5	7.6	20.8	26.1	47.8
Mineral exploration and development ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Mineral land and rights ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Capital expenditures during year (except land and mineral rights) ----- do	57.9	11.1	4.6	1.6	2.4	7.6	8.7
New capital expenditures during year ----- do	40.4	7.2	3.2	1.5	2.0	6.5	5.9
Buildings and other structures, except land ----- do	1.8	.3	(Z)	(Z)	.1	.2	.7
Machinery and equipment ----- do	38.6	7.1	3.1	1.5	1.9	6.3	5.2
Used capital expenditures during year ----- do	17.5	3.8	1.5	.1	.5	1.1	.7
Buildings and other structures, except land ----- do .....	.3	(Z)	.2	-	(Z)	-	(Z)
Machinery and equipment ----- do	17.2	3.8	1.3	.1	.5	1.1	.7
Mineral exploration and development ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Capitalized mineral land and rights ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Deductions from depreciable assets during year ----- do	20.7	1.0	2.2	.1	.4	.9	2.1
Buildings and other structures, except land ----- do	1.1	.2	(Z)	(Z)	(Z)	.1	.1
Machinery and equipment ----- do	19.8	.8	2.2	.1	.5	.8	1.9
Mineral exploration and development ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Mineral land and rights ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Depreciation and depletion charges for year ----- do	44.2	10.5	5.2	1.3	2.3	3.6	7.0
Buildings and other structures, except land ----- do	1.9	.4	.1	(Z)	.1	(Z)	.3
Machinery and equipment ----- do	42.4	10.1	5.1	1.3	2.2	3.6	6.6
Mineral exploration and development ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Mineral land and rights ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Gross book value of depreciable assets at end of year ----- do	383.1	68.8	50.9	9.3	23.8	33.5	55.2
Buildings and other structures, except land ----- do	25.4	8.2	2.2	.1	1.1	.8	3.5
Machinery and equipment ----- do	357.6	62.4	48.8	9.1	22.6	32.7	51.6
Mineral exploration and development ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Mineral land and rights ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Rental payments during year ----- do	6.7	1.3	.6	.4	.6	1.3	1.5
Buildings and other structures, except land ----- do .....	.3	(Z)	.1	(Z)	(Z)	(Z)	(Z)
Machinery and equipment ----- do	6.4	1.3	.6	.4	.8	1.3	1.5
Lease rents ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Expensed mineral exploration, development, land, and rights ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Mineral exploration and development ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Mineral land and rights ----- do	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)

¹Service establishments were requested to report hours worked by kind of work performed, rather than department. These hours worked in millions were other work, .2 hours worked.

²Service establishments were requested to report hours worked by kind of work performed, rather than department. These hours worked in millions were as follows: exploration work, including geophysical and other exploratory surveying, .8; stripping overburden, 1.1; mining minerals not for own account, 3.7; other work, 2.1; n.s.k., 3.1 hours worked.

Table 3b. Summary Statistics by Industry and Type of Operation: 1982

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Item	Industry 1111, Anthracite					Industry 1211, Bituminous Coal and Lignite					
	All establishments	Mines only—open pit	Mines with preparation plants		Separately operated preparation plants	All establishments	Producing establishments				
			Total	Combination and other mining methods			Total	Mines only			
								Total	Underground	Open pit	Combination and other mining methods
Establishments during year.....number.....	152	14	26	19	18	4 513	4 364	3 259	2 894	321	44
With 0 to 19 employees.....do.....	112	8	8	8	13	2 748	2 835	2 351	2 187	151	13
With 20 to 99 employees.....do.....	34	7	13	9	5	1 215	1 198	776	811	142	23
With 100 employees or more.....do.....	8	1	5	4	-	552	551	132	98	28	8
All employees:											
Average for year.....1,000.....	3.4	.5	1.9	1.6	.3	240.9	239.7	78.5	62.5	12.3	3.7
Payroll for year.....mli. dol.....	68.9	8.3	41.4	35.1	6.4	6 570.1	8 538.1	1 872.9	1 452.4	328.8	91.7
Production, development, and exploration workers:											
Average for year.....1,000.....	2.9	.4	1.7	1.4	.2	192.8	192.0	87.7	54.0	10.4	3.3
March.....do.....	3.0	.5	1.7	1.4	.2	206.6	205.9	72.7	57.8	11.5	3.5
May.....do.....	2.9	.5	1.7	1.4	.2	200.1	199.3	70.4	58.3	10.8	3.3
August.....do.....	2.7	.4	1.8	1.3	.2	189.8	188.9	66.5	53.3	9.8	3.4
November.....do.....	2.8	.4	1.7	1.4	.2	175.1	174.4	81.4	49.2	9.4	2.8
Hours.....millions.....	5.5	.7	3.5	2.9	.4	389.5	388.0	122.0	94.3	21.8	5.9
January to March.....do.....	1.3	.2	.8	.6	.1	104.9	104.8	34.8	27.1	5.9	1.7
April to June.....do.....	1.3	.2	.8	.7	.1	97.3	97.0	32.3	25.1	5.8	1.6
July to September.....do.....	1.3	.1	.9	.7	.1	86.8	88.2	29.0	22.4	5.2	1.4
October to December.....do.....	1.5	.2	1.0	.9	.1	80.5	80.0	25.9	19.7	5.0	1.2
Wages.....mli. dol.....	55.7	7.7	35.1	29.5	4.8	5 055.6	5 038.1	1 553.8	1 200.2	276.0	77.5
Supplemental labor costs not included in payroll.....do.....	23.4	4.3	13.1	11.5	2.4	2 706.1	2 897.7	788.9	633.0	120.7	33.2
Legally required expenditures, including Social Security contributions.....do.....	17.3	3.8	9.0	7.9	1.9	1 132.8	1 128.2	346.1	283.0	50.6	12.5
Payments for voluntary programs.....do.....	6.1	.7	4.1	3.6	.5	1 573.5	1 589.5	440.9	350.0	70.1	20.8
Value added by mining.....do.....	171.7	17.7	109.2	86.0	18.9	18 041.2	17 988.0	5 203.5	3 781.8	1 140.4	301.5
Cost of supplies.....do.....	137.7	11.3	64.8	53.1	43.2	12 795.5	12 743.1	2 588.8	1 725.4	682.1	179.3
Supplies used, minerals received, and purchased machinery											
Installed.....do.....	107.1	8.1	44.1	35.1	41.4	9 402.8	9 360.7	1 899.2	1 407.9	402.9	68.5
Resales.....do.....	(D)	-	(D)	(D)	-	282.1	282.1	59.8	2.4	54.1	3.3
Purchased fuels consumed.....do.....	11.0	2.3	6.8	5.2	.8	613.0	610.4	155.4	21.9	115.0	18.4
Purchased electric energy:											
Quantity.....mli. kWh.....	189.8	17.7	127.6	112.3	18.5	14 383.3	14 279.7	2 988.5	2 391.6	408.9	168.1
Cost.....mli. dol.....	9.2	.9	6.2	5.3	1.0	578.1	574.0	130.6	107.0	17.3	8.3
Electric energy generated less sold.....mli. kWh.....	-	-	-	-	-	(D)	(D)	4.4	1.9	2.5	(Z)
Contract work.....mli. dol.....	(D)	.1	(D)	(D)	.1	1 919.5	1 915.8	341.8	186.2	92.7	62.9
Cost of purchased communication services.....do.....	.2	(Z)	.2	.1	(Z)	21.5	21.3	4.0	1.8	1.5	.9
Value of shipments and receipts.....do.....	288.8	27.7	164.7	132.4	59.8	27 895.4	27 895.4	6 942.3	4 864.2	1 637.4	440.7
Value of resales.....do.....	(D)	-	(D)	(D)	-	330.1	330.1	68.2	2.4	82.5	3.3
Hours worked by production, development, and exploration workers.....millions.....	5.5	.7	3.5	2.9	.4	389.5	388.0	122.0	94.3	21.8	5.9
At mines.....do.....	3.7	.7	2.7	2.3	-	287.0	288.2	74.4	47.0	21.5	5.9
Underground.....do.....	.5	-	.3	.2	-	174.8	174.8	48.5	44.3	-	2.2
Open pit.....do.....	2.8	.7	2.1	1.8	-	63.5	83.3	23.8	-	20.7	3.1
Surface, including mine shops and yards.....do.....	.4	(Z)	.4	.3	-	28.7	28.3	4.1	2.7	.8	.8
At preparation plants.....do.....	1.1	-	.7	.8	.4	32.8	32.8	-	-	-	-
Hours worked, n.s.k.....do.....	.7	-	.1	(Z)	(Z)	49.8	49.0	47.6	47.4	.3	(Z)
Hours worked on exploration and development (included above).....do.....	.8	(Z)	.8	.8	-	3.4	3.0	.6	.2	.3	.1
Gross book value of depreciable assets (usually original cost) at beginning of year.....mil. dol.....	179.0	28.8	89.8	87.1	23.1	24 004.0	23 548.7	5 137.8	3 637.0	1 165.2	335.4
Buildings and other structures, except land.....do.....	22.1	1.6	10.9	8.9	7.5	3 231.7	3 154.0	330.9	261.3	58.8	10.7
Machinery and equipment.....do.....	138.8	26.5	67.0	46.6	12.4	18 442.3	18 248.2	4 051.7	2 798.4	973.5	278.8
Mineral exploration and development.....do.....	1.5	(Z)	.1	.1	.2	2 071.5	2 000.8	318.9	259.3	24.3	35.4
Mineral land and rights.....do.....	18.7	.8	11.7	11.5	3.0	2 258.6	2 148.0	436.4	318.2	108.8	9.5
Capital expenditures during year (except land and mineral rights).....do.....	22.9	1.3	9.4	8.7	.5	3 141.3	3 033.8	648.0	622.9	185.1	40.1
New capital expenditures during year.....do.....	14.4	.3	8.8	8.5	.4	2 493.4	2 431.4	878.5	526.7	124.9	25.0
Buildings and other structures, except land.....do.....	1.1	.1	.4	.2	(Z)	396.2	384.8	58.3	32.0	22.3	4.0
Machinery and equipment.....do.....	13.3	.2	8.5	8.3	.3	2 097.3	2 066.7	818.2	494.7	102.6	20.9
Used capital expenditures during year.....do.....	(D)	1.1	(D)	.1	.1	332.9	326.5	111.9	48.3	48.9	14.7
Buildings and other structures, except land.....do.....	.1	-	(Z)	(Z)	(Z)	37.3	36.3	1.1	.2	.8	.1
Machinery and equipment.....do.....	(D)	1.1	(D)	.1	.1	295.8	290.2	110.8	48.1	48.1	14.7
Mineral exploration and development.....do.....	(D)	-	(D)	(Z)	(Z)	315.0	275.8	59.6	47.8	11.3	.5
Capitalized mineral land and rights.....do.....	.2	(Z)	.1	.1	(Z)	112.8	97.2	27.6	19.7	8.3	1.8
Deductions from depreciable assets during year.....do.....	9.8	.2	2.7	1.1	1.1	1 254.8	1 213.8	624.8	503.1	81.0	40.7
Buildings and other structures, except land.....do.....	.4	-	(Z)	(Z)	(Z)	60.2	59.1	8.3	5.9	1.8	.8
Machinery and equipment.....do.....	(D)	.2	(D)	1.0	1.2	1 070.4	1 037.1	547.7	438.9	71.6	39.2
Mineral exploration and development.....do.....	(D)	-	(D)	(Z)	(Z)	70.8	68.4	40.3	38.6	1.2	.5
Mineral land and rights.....do.....	.1	(Z)	.1	.1	(Z)	53.4	49.3	28.6	21.8	8.4	.3
Depreciation and depletion charges for year.....do.....	15.9	2.8	7.2	5.0	1.8	2 094.6	2 065.3	497.5	329.9	137.8	29.8
Buildings and other structures, except land.....do.....	1.3	.1	.8	.4	.4	163.3	159.8	25.4	20.2	4.0	1.2
Machinery and equipment.....do.....	13.1	2.7	8.0	4.1	1.1	1 724.1	1 708.9	438.0	284.9	125.6	27.5
Mineral exploration and development.....do.....	.6	(Z)	(Z)	(Z)	(Z)	109.5	105.7	13.6	11.4	1.7	.4
Mineral land and rights.....do.....	.9	(Z)	.6	.5	.1	97.7	91.1	20.5	13.4	8.5	.8
Gross book value of depreciable assets at end of year.....do.....	192.3	30.0	96.8	72.7	22.5	28 003.0	25 465.7	5 388.4	3 776.4	1 275.8	336.4
Buildings and other structures, except land.....do.....	22.9	1.7	11.3	9.2	7.8	3 605.0	3 496.0	382.1	287.7	80.2	14.2
Machinery and equipment.....do.....	145.3	27.8	73.5	51.9	11.7	17 784.8	17 566.0	4 233.1	2 904.4	1 052.5	278.1
Mineral exploration and development.....do.....	7.4	(Z)	.1	.1	.2	2 315.7	2 207.9	338.2	268.5	34.3	35.3
Mineral land and rights.....do.....	18.8	.7	11.8	11.5	3.1	2 317.7	2 198.0	435.4	316.1	108.5	10.8
Rental payments during year.....do.....	5.0	.8	4.0	2.7	.4	306.1	303.3	88.7	23.7	36.3	8.6
Buildings and other structures, except land.....do.....	.3	(Z)	.3	.3	-	25.1	24.8	4.0	2.1	1.1	.8
Machinery and equipment.....do.....	4.7	.6	3.7	2.4	.4	280.9	278.5	62.7	21.8	35.2	5.8
Lease rents.....do.....	1.4	.4	.9	.5	-	296.4	295.0	46.3	24.9	17.8	3.8
Expensed mineral exploration, development, land, and rights.....do.....	(D)	-	(D)	(D)	-	917.3	912.9	135.4	62.4	87.4	5.5
Mineral exploration and development.....do.....	(D)	-	(D)	(D)	-	451.5	448.7	73.0	38.7	34.8	1.5
Mineral land and rights.....do.....	.2	-	.2	-	-	465.8	464.2	62.4	25.7	32.7	3.9

Table 3b. Summary Statistics by Industry and Type of Operation: 1982—Con.

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Item	Industry 1211, Bituminous Coal and Lignite—Con.					
	Producing establishments—Con.					Nonproducing establishments
	Mines with preparation plants				Separately operated preparation plants	
	Total	Underground	Open pit	Combination and other mining methods		
Establishments during year.....number..	777	339	334	104	112	129
With 0 to 19 employees.....do..	138	49	87	20	44	111
With 20 to 99 employees.....do..	289	80	155	34	59	17
With 100 employees or more.....do..	372	210	112	50	9	1
All employees:						
Average for year.....1,000..	142.5	83.3	39.6	19.5	4.4	1.3
Payroll for year.....mli. dol..	4 096.0	2 289.7	1 238.8	587.8	115.3	32.1
Production, development, and exploration workers:						
Average for year.....1,000..	120.7	72.1	32.0	18.8	3.7	.7
March.....do..	129.2	78.5	32.7	18.0	4.0	.7
May.....do..	125.1	75.3	32.8	17.0	3.8	.8
August.....do..	118.7	70.6	31.7	18.5	3.8	.7
November.....do..	109.8	64.2	30.7	14.9	3.3	.7
Hours.....millions..	238.9	138.1	68.5	34.3	7.1	1.5
January to March.....do..	87.7	39.9	18.1	9.7	2.1	.4
April to June.....do..	82.9	38.0	17.9	8.9	1.8	.3
July to September.....do..	55.8	31.3	18.3	8.0	1.8	.4
October to December.....do..	52.8	28.8	18.2	7.8	1.5	.4
Wages.....mli. dol..	3 390.8	1 928.4	988.3	478.1	93.5	17.8
Supplemental labor costs not included in payroll.....do..	1 864.4	1 177.2	425.3	282.0	48.3	8.4
Legally required expenditures, including Social Security contributions.....do..	762.7	503.4	145.9	113.4	19.4	4.4
Payments for voluntary programs.....do..	1 101.7	873.8	279.4	148.5	28.9	4.0
Value added by mining.....do..	12 422.6	5 912.8	4 788.1	1 744.0	359.8	55.3
Cost of supplies.....do..	7 544.1	3 219.5	2 788.5	1 558.1	2 812.1	52.5
Supplies used, minerals received, and purchased machinery:						
Installed.....do..	4 910.9	2 295.1	1 647.2	768.8	2 550.8	42.1
Resales.....do..	209.7	89.9	66.1	53.7	12.7	—
Purchased fuels consumed.....do..	447.3	38.8	335.2	73.4	7.8	2.8
Purchased electric energy:						
Quantity.....mil. kWh..	10 560.4	5 649.2	3 508.9	1 204.3	732.8	83.8
Cost.....mli. dol..	413.4	232.5	132.8	48.2	30.0	4.1
Electric energy generated less sold.....mil. kWh..	(D)	2.2	(D)	.4	(D)	(Z)
Contract work.....mil. dol..	1 562.9	563.2	385.5	814.3	11.1	3.6
Cost of purchased communication services.....do..	18.8	7.5	8.0	3.2	.7	.2
Value of shipments and receipts.....do..	17 858.7	8 081.9	8 710.3	3 088.5	2 894.4	—
Value of resales.....do..	248.7	103.8	85.9	59.0	13.1	—
Hours worked by production, development, and exploration workers.....millions..	238.9	136.1	68.5	34.3	7.1	1.5
At mines.....do..	211.6	121.2	81.8	28.8	.2	.8
Underground.....do..	128.2	112.2	—	15.9	—	.2
Open pit.....do..	59.5	—	50.7	8.8	—	.2
Surface, including mine shops and yards.....do..	23.9	9.0	11.1	3.8	.2	.4
At preparation plants.....do..	25.9	13.8	6.7	5.5	8.8	.1
Hours worked, n.s.k.....do..	1.4	1.1	(Z)	.2	(Z)	.8
Hours worked on exploration and development (included above).....do..	2.4	1.7	.3	.3	.1	.4
Gross book value of depreciable assets (usually original cost) at beginning of year.....mil. dol..	17 593.7	8 081.3	7 176.7	2 335.7	817.4	455.3
Buildings and other structures, except land.....do..	2 713.7	1 360.1	924.4	429.1	109.4	77.8
Machinery and equipment.....do..	11 552.0	4 898.8	5 302.3	1 351.1	642.5	196.1
Mineral exploration and development.....do..	1 852.5	1 271.8	247.5	133.4	29.4	70.8
Mineral land and rights.....do..	1 675.5	551.0	702.5	422.0	38.1	110.8
Capital expenditures during year (except land and mineral rights).....do..	2 108.0	1 070.2	822.2	215.8	77.5	107.7
New capital expenditures during year.....do..	1 704.5	874.8	651.6	178.3	50.4	61.9
Buildings and other structures, except land.....do..	297.7	179.2	102.7	15.8	8.8	31.4
Machinery and equipment.....do..	1 408.9	895.4	549.0	162.5	41.8	30.6
Used capital expenditures during year.....do..	209.9	91.4	93.5	25.0	4.7	8.4
Buildings and other structures, except land.....do..	34.8	28.5	3.1	3.3	.3	1.0
Machinery and equipment.....do..	175.0	62.9	90.3	21.7	4.4	5.4
Mineral exploration and development.....do..	193.6	104.1	77.2	12.3	22.4	39.4
Capitalized mineral land and rights.....do..	69.1	16.5	43.0	9.8	.8	15.3
Deductions from depreciable assets during year.....do..	557.5	278.9	204.3	76.3	31.8	41.0
Buildings and other structures, except land.....do..	47.2	33.8	10.3	3.1	3.8	1.2
Machinery and equipment.....do..	467.8	223.7	180.7	63.4	21.8	33.3
Mineral exploration and development.....do..	22.5	10.3	8.1	6.0	5.7	2.4
Mineral land and rights.....do..	20.0	9.1	7.1	3.8	.7	4.2
Depreciation and depletion charges for year.....do..	1 509.8	550.1	765.6	194.1	58.0	29.3
Buildings and other structures, except land.....do..	128.4	85.5	37.2	25.6	5.8	3.8
Machinery and equipment.....do..	1 228.5	416.8	873.1	138.8	42.3	15.3
Mineral exploration and development.....do..	85.7	49.3	30.3	8.0	6.5	3.8
Mineral land and rights.....do..	87.2	18.5	24.9	23.8	3.4	6.6
Gross book value of depreciable assets at end of year.....do..	19 213.3	8 891.1	7 837.8	2 484.7	863.9	537.4
Buildings and other structures, except land.....do..	2 999.0	1 534.0	1 019.9	445.1	114.9	109.0
Machinery and equipment.....do..	12 666.0	5 433.3	5 760.8	1 471.9	666.9	198.8
Mineral exploration and development.....do..	1 823.6	1 385.4	318.5	139.8	46.1	107.8
Mineral land and rights.....do..	1 724.8	558.3	738.4	427.9	36.0	121.8
Rental payments during year.....do..	218.1	78.5	73.8	65.7	18.6	2.8
Buildings and other structures, except land.....do..	14.5	4.2	2.7	7.5	8.3	.3
Machinery and equipment.....do..	203.8	74.3	71.1	58.2	12.2	2.4
Lease rents.....do..	237.5	67.0	95.1	75.4	11.2	1.4
Expensed mineral exploration, development, land, and rights.....do..	769.3	207.7	498.4	63.3	8.2	4.4
Mineral exploration and development.....do..	371.5	154.0	195.8	21.8	4.2	2.8
Mineral land and rights.....do..	397.9	53.7	302.6	41.5	4.0	1.8

Table 3c. Inventories by Industry: End of 1981 and 1982

[Million dollars. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Item	Industry 1111, Anthracite		Industry 1112, Anthracite Mining Services		Industry 1211, Bituminous Coal and Lignite		Industry 1213, Bituminous Coal and Lignite Mining Services	
	End of 1981	End of 1982	End of 1981	End of 1982	End of 1981	End of 1982	End of 1981	End of 1982
Total inventories¹	28.7	41.7	.1	.1	1 461.3	2 308.2	29.3	27.7
Detail by method of valuation:								
Subject to LIFO costing ²	-	-	-	-	89.4	80.2	(D)	(D)
LIFO reserve	-	-	-	-	21.2	13.8	(D)	(D)
LIFO value	-	-	-	-	68.3	66.5	(D)	(D)
Not subject to LIFO costing	20.2	28.9	(Z)	(Z)	995.3	1 753.3	6.5	6.1
Valuation method not reported ³	8.5	12.7	.1	.1	372.7	470.0	(D)	(D)
Amount subject to LIFO reported without associated reserve and value ⁴	-	-	-	-	3.9	4.7	-	-
Detail by type of inventory:								
Mined or quarried products	25.0	37.3	(NA)	(NA)	663.3	980.8	(NA)	(NA)
Supplies, parts, fuels, etc	3.7	4.3	(NA)	(NA)	798.0	1 327.5	(NA)	(NA)

¹Beginning in the 1982 economic censuses, all respondents were requested to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from the 1977 census in which respondents were permitted to value their inventories using any generally accepted accounting method.

²Only includes data reported by respondents who (a) indicated amount of inventories subject to LIFO cost, and (b) provided sufficient information to determine associated LIFO reserve and value figures.

³Includes data estimated for nonresponse and nonmail administrative records and data reported by respondents who provided total inventory figures without other information.

⁴Includes data reported by respondents who indicated their inventories were subject to LIFO cost but did not provide associated LIFO reserve and value figures.

Table 4. Industry Statistics by Employment Size of Establishment: 1982

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Industry and employment size class	E ¹	Estab- lishments during year (number)	All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expendi- tures (million dollars)
			Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
INDUSTRY 1111, ANTHRACITE											
Total	-	152	3.4	66.9	2.9	5.5	55.7	171.7	137.7	266.6	22.9
Establishments during year with an average of—											
0 to 4 employees	E8	60	.1	1.5	.1	.2	1.5	5.3	5.4	9.9	.6
5 to 9 employees	E2	28	.2	2.7	.2	.3	2.3	8.4	11.3	16.1	1.6
10 to 19 employees	E1	24	.3	5.1	.3	.5	4.3	16.3	14.8	31.7	1.3
20 to 49 employees	-	26	.6	15.9	.7	1.2	12.3	48.5	44.7	83.4	9.8
50 to 99 employees	E1	8	.6	10.3	.4	.9	8.1	27.3	19.5	43.0	3.6
100 to 249 employees	-	5	1.4	31.3	1.2	2.6	27.2	64.0	42.1	100.5	5.6
250 to 499 employees	-	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Covered by administrative records ²	E9	58	.1	1.8	.1	.2	1.8	8.2	4.1	9.1	1.2
INDUSTRY 1112, ANTHRACITE MINING SERVICES											
Total	E6	21	.1	2.1	.1	.2	1.7	4.7	2.5	6.7	.5
Establishments during year with an average of—											
0 to 4 employees	E9	9	(Z)	.2	(Z)	(Z)	.2	.4	.3	.6	.1
5 to 9 employees	E4	8	(Z)	.7	(Z)	.1	.5	1.8	.9	2.4	.1
10 to 19 employees	E7	5	.1	1.2	.1	.1	1.0	2.7	1.4	3.7	.3
20 to 49 employees	-	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Covered by administrative records ²	E9	7	(Z)	.2	(Z)	(Z)	.2	.4	.2	.6	.1
INDUSTRY 1211, BITUMINOUS COAL AND LIGNITE											
Total	E1	4 513	240.9	6 570.1	192.8	369.5	5 055.6	18 041.2	12 795.5	27 695.4	3 141.3
Establishments during year with an average of—											
0 to 4 employees	E8	1 121	2.0	38.3	1.7	2.7	32.0	137.9	129.1	232.1	35.0
5 to 9 employees	E5	671	4.6	69.0	3.7	6.6	66.4	275.5	239.6	451.9	63.4
10 to 19 employees	E4	954	13.3	271.7	10.9	19.3	208.1	800.3	875.1	1 316.1	157.3
20 to 49 employees	E2	884	27.0	820.1	21.7	40.5	475.7	1 834.5	1 847.3	3 370.3	411.6
50 to 99 employees	E1	331	22.8	597.9	16.8	32.5	423.3	1 759.4	2 037.8	3 357.9	439.3
100 to 249 employees	-	293	47.3	1 336.4	38.2	71.6	1 009.2	3 727.5	3 128.5	6 137.8	716.4
250 to 499 employees	-	175	82.9	1 827.4	50.7	99.8	1 419.2	4 880.2	2 491.8	8 763.7	608.2
500 to 999 employees	-	73	47.1	1 360.5	40.2	76.5	1 120.4	3 604.3	1 696.4	4 805.3	495.3
1,000 to 2,499 employees	-	11	14.3	428.8	10.6	19.8	301.3	921.5	549.8	1 258.5	212.7
Covered by administrative records ²	E9	1 085	3.9	52.8	3.4	5.7	45.4	187.2	83.8	216.2	32.7
INDUSTRY 1213, BITUMINOUS COAL AND LIGNITE MINING SERVICES											
Total	E1	492	6.6	166.1	5.6	10.8	132.0	413.5	209.7	565.3	57.9
Establishments during year with an average of—											
0 to 4 employees	E6	237	.4	7.3	.3	.7	8.1	19.4	9.9	26.3	2.9
5 to 9 employees	E2	73	.5	10.2	.4	.8	6.3	26.3	14.0	35.2	5.2
10 to 19 employees	E2	93	1.3	28.0	1.1	2.1	23.5	70.0	35.6	96.1	9.6
20 to 49 employees	E1	61	2.0	49.9	1.6	2.9	40.0	117.3	52.2	156.8	12.7
50 to 99 employees	E1	22	1.5	42.4	1.2	2.8	31.3	101.8	59.4	141.7	19.3
100 to 249 employees	-	4	1.1	28.4	.9	1.8	22.8	78.7	39.7	109.2	8.2
250 to 499 employees	-	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Covered by administrative records ²	E9	96	.3	3.3	.2	.4	3.1	10.1	5.0	13.5	1.6

See footnotes at end of table.

Table 4. Industry Statistics by Employment Size of Establishment: 1982—Con.

Note: Data shown as a (D) are included in underscored figures above.

¹Some payroll and sales data for small single-unit companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of figures shown: E1—10 to 19 percent; E2—20 to 29 percent; E3—30 to 39 percent; E4—40 to 49 percent; E5—50 to 59 percent; E6—60 to 69 percent; E7—70 to 79 percent; E8—80 to 89 percent; E9—90 percent or more.

²Some payroll and sales data for small single-unit companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate data shown for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry-Product Analysis—Summary of Industry Shipments and Receipts and Net Shipments of Primary Products: 1982 and 1977

[Million dollars. An establishment is assigned to an industry based on shipment values of products representing largest amount considered primary to an industry. Frequently, establishment shipments comprise mixtures of products assigned to an industry (primary), those considered primary to other industries (secondary), and receipts for activities such as resales or contract work. Columns A-E show this product pattern for an industry. Extent to which an industry's primary products are shipped by establishments classified in and out of an industry is shown in columns F-H. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

SIC code	Industry and year	Value of shipments and receipts					Value of net shipments of primary products or services		
		Total	Primary products	Secondary products	Receipts for services	Products purchased and resold without further processing	Total produced in all industries	Produced in this industry	Produced in other industries
		A	B	C	D	E	F	G	H
1111	Anthracite 1982..	286.6	262.0	(D)	(Z)	(D)	1224.3	224.3	-
	..... 1977..	217.0	211.6	-	(Z)	5.4	² 168.5	168.5	-
1112	Anthracite mining services..... 1982..	6.7	6.7	-	-	-	6.7	6.7	-
	..... 1977..	10.2	10.2	-	-	-	10.2	10.2	(Z)
1211	Bituminous coal and lignite 1982..	27 695.4	27 329.3	6.5	29.5	330.1	¹ 21 631.3	21 629.2	2.1
	..... 1977..	16 301.1	16 127.6	(D)	9.5	(D)	¹ 13 121.1	13 120.2	.9
1213	Bituminous coal and lignite mining services..... 1982..	565.3	557.4	(D)	(D)	(Z)	589.7	557.4	32.3
	..... 1977..	407.4	392.6	(D)	-	(D)	411.7	392.6	16.9

¹Represents raw coal for use without preparation plus prepared coal.

²Represents gross shipments less raw coal received for preparation.

Table 6a. Products or Services for Selected States: 1982 and 1977

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of the products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Product or service code	Geographic area and product or service	1962 shipments or receipts for services		1977 shipments or receipts for services	
		Quantity	Value (million dollars)	Quantity	Value (million dollars)
	ANTHRACITE				
	United States				
1111- —	Anthracite, net shipments ¹ -----1,000 s. tons--	4 226.4	224.3	(X)	168.5
11111 —	Raw anthracite shipped ----- do--	2 665.6	45.7	(D)	(D)
11111 01	For use without preparation----- do--	137.5	4.6	(D)	(D)
11111 03	For preparation at other establishments ² ----- do--	2 528.2	41.1	2 933.5	42.1
11112 —	Prepared anthracite shipped ----- do--	4 088.9	219.7	4 184.0	164.6
11112 01	Mechanically cleaned by wet-washing or pneumatic methods ----- do--	3 179.5	183.4	4 038.9	159.6
11112 03	Other preparation only, such as mechanical crushing, screening, or sizing ----- do--	909.4	36.3	145.1	5.0
11110 00	Anthracite mining, n.s.k. ³ -----	(X)	16.6	(X)	(D)
	ANTHRACITE MINING SERVICES				
	United States				
1112- —	Anthracite mining services-----	(X)	6.7	(X)	10.2
11120 12	Stripping overburden-----	(X)	-	(X)	(D)
11120 13	Prospect and test drilling-----	(X)	(D)	(X)	-
11120 14	Strip mining anthracite not for own account-----1,000 s. tons--	(D)	(D)	(D)	(D)
11120 15	Drilling, other than prospect and test drilling, including blasting-----	(X)	(D)	(X)	-
11120 16	Recovering culm bank material not for own account-----1,000 s. tons--	-	-	(D)	(D)
11120 19	Other anthracite mining services-----	(X)	(D)	(X)	7.6
11120 00	Anthracite mining services, n.s.k. ⁴ -----	(X)	5.0	(X)	

See footnotes at end of table.

Table 6a. Products or Services for Selected States: 1982 and 1977—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of the products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Product or service code	Geographic area and product or service	1982 shipments or receipts for services		1977 shipments or receipts for services	
		Quantity	Value (million dollars)	Quantity	Value (million dollars)
	BITUMINOUS COAL AND LIGNITE				
	United States				
1211- —	Bituminous coal and lignite, net shipments ⁵ -----mil. s. tons--	758.6	21 631.3	636.2	13 121.1
12111 —	Raw bituminous coal and lignite shipped ----- do--	220.1	4 988.9	233.3	3 853.6
12111 01	For use without preparation----- do--	80.6	1 473.2	103.6	1 530.7
12111 03	For preparation at other establishments ² ----- do--	159.3	3 515.6	129.5	2 323.1
12112 —	Prepared bituminous coal and lignite shipped ----- do--	697.6	20 158.1	532.4	11 590.4
12112 01	Mechanically cleaned by wet-washing or pneumatic methods ----- do--	381.4	14 250.3	293.1	6 208.6
12112 03	Other preparation only, such as mechanical crushing, screening, or sizing ----- do--	318.4	5 907.7	239.3	3 381.6
12110 00	Bituminous coal and lignite mining, n.s.k. ³ ----- do--	(X)	2 184.4	(X)	684.9
	Colorado				
1211- —	Bituminous coal and lignite, net shipments ⁵ -----mil. s. tons--	17.3	388.3	9.7	154.5
12111 —	Raw bituminous coal and lignite shipped ----- do--	(D)	(D)	(D)	(D)
12111 01	For use without preparation----- do--	5.1	80.6	(NA)	(NA)
12111 03	For preparation at other establishments ² ----- do--	(D)	(D)	(NA)	(NA)
12112 —	Prepared bituminous coal and lignite shipped ----- do--	12.2	307.8	(NA)	(NA)
12112 01	Mechanically cleaned by wet-washing or pneumatic methods ----- do--	1.1	50.8	(D)	(D)
12112 03	Other preparation only, such as mechanical crushing, screening, or sizing ----- do--	11.1	256.9	(D)	(D)
12110 00	Bituminous coal and lignite mining, n.s.k. ³ ----- do--	(X)	21.9	(X)	2.5
	Kansas				
1211- —	Bituminous coal and lignite, net shipments ⁵ -----mil. s. tons--	1.0	32.3	(NA)	(NA)
12112 —	Prepared bituminous coal and lignite shipped ----- do--	1.0	32.3	(NA)	(NA)
12112 01	Mechanically cleaned by wet-washing or pneumatic methods ----- do--	(D)	(D)	(NA)	(NA)
12112 03	Other preparation only, such as mechanical crushing, screening, or sizing ----- do--	(D)	(D)	(NA)	(NA)
12110 00	Bituminous coal and lignite mining, n.s.k. ³ ----- do--	(X)	(D)	(X)	(NA)
	Kentucky				
1211- —	Bituminous coal and lignite, net shipments ⁵ -----mil. s. tons--	113.2	3 956.0	116.9	2 549.0
12111 —	Raw bituminous coal and lignite shipped ----- do--	66.1	1 538.3	66.6	1 034.4
12111 01	For use without preparation----- do--	16.1	460.7	32.5	517.8
12111 03	For preparation at other establishments ² ----- do--	50.0	1 077.7	34.3	516.6
12112 —	Prepared bituminous coal and lignite shipped ----- do--	97.1	3 495.3	84.4	2 031.2
12112 01	Mechanically cleaned by wet-washing or pneumatic methods ----- do--	69.4	2 590.6	46.9	1 279.1
12112 03	Other preparation only, such as mechanical crushing, screening, or sizing ----- do--	27.7	904.6	37.5	752.1
12110 00	Bituminous coal and lignite mining, n.s.k. ³ ----- do--	(X)	727.8	(X)	239.2
	Maryland				
1211- —	Bituminous coal and lignite, net shipments ⁵ -----mil. s. tons--	(D)	(D)	(NA)	(NA)
12111 —	Raw bituminous coal and lignite shipped ----- do--	.6	13.4	(NA)	(NA)
12111 01	For use without preparation----- do--	-	-	(NA)	(NA)
12111 03	For preparation at other establishments ² ----- do--	.6	13.4	(NA)	(NA)
12112 —	Prepared bituminous coal and lignite shipped ----- do--	(D)	(D)	(NA)	(NA)
12112 01	Mechanically cleaned by wet-washing or pneumatic methods ----- do--	(D)	(D)	(NA)	(NA)
12112 03	Other preparation only, such as mechanical crushing, screening, or sizing ----- do--	.3	7.6	(NA)	(NA)
12110 00	Bituminous coal and lignite mining, n.s.k. ³ ----- do--	(X)	6.1	(X)	(NA)
	New Mexico				
1211- —	Bituminous coal and lignite, net shipments ⁵ -----mil. s. tons--	16.7	329.3	13.3	110.1
	Ohio				
1211- —	Bituminous coal and lignite, net shipments ⁵ -----mil. s. tons--	35.6	1 212.9	43.4	807.0
12111 —	Raw bituminous coal and lignite shipped ----- do--	11.0	232.2	13.9	204.5
12111 01	For use without preparation----- do--	2.7	53.1	4.9	67.5
12111 03	For preparation at other establishments ² ----- do--	6.3	179.2	9.0	137.0
12112 —	Prepared bituminous coal and lignite shipped ----- do--	32.9	1 159.8	38.5	739.5
12112 01	Mechanically cleaned by wet-washing or pneumatic methods ----- do--	22.8	672.3	18.3	349.3
12112 03	Other preparation only, such as mechanical crushing, screening, or sizing ----- do--	10.1	287.5	22.2	390.2
12110 00	Bituminous coal and lignite mining, n.s.k. ³ ----- do--	(X)	104.3	(X)	38.4
	Oklahoma				
1211- —	Bituminous coal and lignite, net shipments ⁵ -----mil. s. tons--	3.4	117.8	(NA)	(NA)
12111 —	Raw bituminous coal and lignite shipped ----- do--	.6	29.1	(NA)	(NA)
12111 01	For use without preparation----- do--	.8	28.5	(NA)	(NA)
12111 03	For preparation at other establishments ² ----- do--	(Z)	.5	(NA)	(NA)
12112 —	Prepared bituminous coal and lignite shipped ----- do--	2.6	89.3	(NA)	(NA)
12110 00	Bituminous coal and lignite mining, n.s.k. ³ ----- do--	(X)	12.9	(X)	(NA)

See footnotes at end of table.

Table 6a. **Products or Services for Selected States: 1982 and 1977—Con.**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of the products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Product or service code	Geographic area and product or service	1982 shipments or receipts for services		1977 shipments or receipts for services	
		Quantity	Value (million dollars)	Quantity	Value (million dollars)
BITUMINOUS COAL AND LIGNITE—Con.					
Pennsylvania					
1211—	Bituminous coal and lignite, net shipments ⁵ .....mil. s. tons..	87.1	2 438.7	79.8	2 170.1
12111 —	Raw bituminous coal and lignite shipped	28.7	684.1	40.8	815.9
12111 01	For use without preparation	8.5	206.5	14.7	286.5
12111 03	For preparation at other establishments ²	20.2	477.8	28.1	529.4
12112 —	Prepared bituminous coal and lignite shipped	58.6	2 232.2	64.9	1 883.8
12112 01	Mechanically cleaned by wet-washing or pneumatic methods	47.3	1 873.9	48.3	1 544.8
12112 03	Other preparation only, such as mechanical crushing, screening, or sizing	11.3	358.4	16.8	339.0
12110 00	Bituminous coal and lignite mining, n.s.k. ³	(X)	201.9	(X)	57.8
Tennessee					
1211—	Bituminous coal and lignite, net shipments ⁵ .....mil. s. tons..	8.0	210.3	7.5	183.3
12111 —	Raw bituminous coal and lignite shipped	4.3	107.2	6.4	127.9
12111 01	For use without preparation .....	.9	23.5	(NA)	(NA)
12111 03	For preparation at other establishments ²	3.4	83.7	(NA)	(NA)
12112 —	Prepared bituminous coal and lignite shipped	5.1	186.8	(D)	(D)
12112 01	Mechanically cleaned by wet-washing or pneumatic methods	(D)	(D)	(D)	(D)
12112 03	Other preparation only, such as mechanical crushing, screening, or sizing	(D)	(D)	3.7	82.8
12110 00	Bituminous coal and lignite mining, n.s.k. ³	(X)	74.1	(X)	20.9
Utah					
1211—	Bituminous coal and lignite, net shipments ⁵ .....mil. s. tons..	14.8	450.8	9.6	215.0
12112 —	Prepared bituminous coal and lignite shipped	(D)	(D)	(D)	(D)
12112 01	Mechanically cleaned by wet-washing or pneumatic methods	3.8	140.1	3.8	125.4
12112 03	Other preparation only, such as mechanical crushing, screening, or sizing	(D)	(D)	(D)	(D)
12110 00	Bituminous coal and lignite mining, n.s.k. ³	(X)	(D)	(X)	.5
Virginia					
1211—	Bituminous coal and lignite, net shipments ⁵ .....mil. s. tons..	37.6	1 569.6	35.5	1 030.3
12111 —	Raw bituminous coal and lignite shipped	23.2	523.2	22.4	435.8
12111 01	For use without preparation	2.9	69.5	5.0	95.5
12111 03	For preparation at other establishments ²	20.3	453.7	17.4	340.3
12112 —	Prepared bituminous coal and lignite shipped	34.7	1 500.1	30.5	934.8
12112 01	Mechanically cleaned by wet-washing or pneumatic methods	28.2	1 252.2	20.2	693.4
12112 03	Other preparation only, such as mechanical crushing, screening, or sizing	8.5	247.8	10.3	241.4
12110 00	Bituminous coal and lignite mining, n.s.k. ³	(X)	329.7	(X)	142.7
West Virginia					
1211—	Bituminous coal and lignite, net shipments ⁵ .....mil. s. tons..	118.8	4 602.0	98.3	3 100.8
12111 —	Raw bituminous coal and lignite shipped	42.8	945.8	34.0	678.5
12111 01	For use without preparation	5.7	128.2	7.8	157.3
12111 03	For preparation at other establishments ²	37.1	817.8	26.4	519.2
12112 —	Prepared bituminous coal and lignite shipped	113.2	4 473.8	90.7	2 943.3
12112 01	Mechanically cleaned by wet-washing or pneumatic methods	103.5	4 153.2	72.5	2 543.0
12112 03	Other preparation only, such as mechanical crushing, screening, or sizing	9.7	320.8	18.2	400.3
12110 00	Bituminous coal and lignite mining, n.s.k. ³	(X)	439.2	(X)	114.9
BITUMINOUS COAL AND LIGNITE MINING SERVICES					
United States					
1213—	Bituminous coal and lignite mining services	(X)	589.7	(X)	411.7
12130 12	Stripping overburden	(X)	19.2	(X)	31.5
12130 13	Prospect and test drilling	(X)	19.4	(X)	15.8
12130 14	Strip mining coal not for own account .....1,000 s. tons..	23 473.6	213.2	(S)	205.9
12130 15	Drilling, other than prospect and test drilling, including blasting	(X)	4.7	(X)	16.2
12130 18	Auger mining coal not for own account .....1,000 s. tons..	1 724.6	25.2	(S)	4.9
12130 17	Sinking mine shafts and driving mine tunnels	(X)	73.2	(X)	73.9
12130 19	Other bituminous coal and lignite mining services	(X)	107.5	(X)	30.5
12130 00	Bituminous coal and lignite services, n.s.k. ⁴	(X)	127.2	(X)	33.3

See footnotes at end of table.

Table 6a. **Products or Services for Selected States: 1982 and 1977—Con.**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of the products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Product or service code	Geographic area and product or service	1982 shipments or receipts for services		1977 shipments or receipts for services	
		Quantity	Value (million dollars)	Quantity	Value (million dollars)
	BITUMINOUS COAL AND LIGNITE MINING SERVICES—Con.				
	Kentucky				
1213- —	Bituminous coal and lignite mining services.....	(X)	94.9	(X)	(NA)
12130 13	Prospect and test drilling	(X)	1.6	(X)	(NA)
12130 14	Strip mining coal not for own account 1,000 s. tons..	891.6	21.3	(NA)	(NA)
12130 18	Auger mining coal not for own account do..	199.9	2.6	(NA)	(NA)
12130 19	Other bituminous coal and lignite mining services	(X)	31.0	(X)	(NA)
12130 00	Bituminous coal and lignite services, n.s.k. ⁴	(X)	29.4	(X)	(NA)
	Ohio				
1213- —	Bituminous coal and lignite mining services.....	(X)	56.8	(X)	(NA)
12130 14	Strip mining coal not for own account 1,000 s. tons..	772.3	14.2	(NA)	(NA)
12130 18	Auger mining coal not for own account do..	1 187.5	18.1	(NA)	(NA)
12130 00	Bituminous coal and lignite services, n.s.k. ⁴	(X)	7.5	(X)	(NA)
	Pennsylvania				
1213- —	Bituminous coal and lignite mining services.....	(X)	43.4	(X)	(NA)
12130 13	Prospect and test drilling	(X)	2.4	(X)	(NA)
12130 14	Strip mining coal not for own account 1,000 s. tons..	937.0	13.4	(NA)	(NA)
12130 18	Auger mining coal not for own account do..	97.5	1.5	(NA)	(NA)
12130 19	Other bituminous coal and lignite mining services	(X)	3.0	(X)	(NA)
12130 00	Bituminous coal and lignite services, n.s.k. ⁴	(X)	14.4	(X)	(NA)
	Virginia				
1213- —	Bituminous coal and lignite mining services.....	(X)	66.5	(X)	(NA)
12130 14	Strip mining coal not for own account 1,000 s. tons..	375.9	8.4	(X)	(NA)
12130 19	Other bituminous coal and lignite mining services	(X)	32.8	(X)	(NA)
12130 00	Bituminous coal and lignite services, n.s.k. ⁴	(X)	20.4	(X)	(NA)
	West Virginia				
1213- —	Bituminous coal and lignite mining services.....	(X)	107.3	(X)	(NA)
12130 13	Prospect and test drilling	(X)	(D)	(X)	(NA)
12130 14	Strip mining coal not for own account 1,000 s. tons..	948.0	26.1	(X)	(NA)
12130 17	Sinking mine shafts and driving mine tunnels	(X)	23.8	(X)	(NA)
12130 19	Other bituminous coal and lignite mining services	(X)	15.7	(X)	(NA)
12130 00	Bituminous coal and lignite services, n.s.k. ⁴	(X)	34.1	(X)	(NA)

¹For 1977, represents gross shipments less raw coal received for preparation and for 1982, represents raw coal for use without preparation plus prepared coal.

²Includes estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

³Represents value for establishments that did not report detailed data.

⁴Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

⁵Represents raw coal for use without preparation plus prepared coal.

Table 6b. Net Production of Coal by Type of Mining for Selected States: 1982

[Million short tons. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Industry and geographic area	Total net coal mined ¹	Strip pit		Underground	Auger, culm bank, or dredge	
		Mined by own employees	Mined by outside contractor		Mined by own employees	Mined by outside contractor
INDUSTRY 1111, ANTHRACITE						
United States (Pennsylvania)	4.1	2.2	-	(D)	1.5	(D)
INDUSTRY 1211, BITUMINOUS COAL AND LIGNITE						
United States	770.5	405.3	37.3	325.7	1.0	1.2
Alabama	23.4	12.1	(D)	11.1	-	(D)
Colorado	17.4	10.9	-	6.4	-	-
Illinois	60.0	(D)	(D)	38.8	-	-
Indiana	25.7	25.3	(D)	(D)	-	-
Iowa .....	.6	.6	-	-	-	-
Kansas .....	.9	.9	-	-	-	-
Kentucky	121.0	49.3	4.9	66.3	.3	.3
Maryland	2.7	(D)	-	(D)	-	-
Missouri	6.2	(D)	(D)	-	-	-
North Dakota	18.1	18.1	-	-	-	-
Ohio	35.0	19.4	2.6	12.0	(D)	(D)
Oklahoma	3.3	(D)	-	(D)	-	-
Pennsylvania	66.2	28.4	3.0	34.4	.1	.2
Tennessee	8.5	(D)	(D)	4.6	-	-
Utah	14.7	-	-	14.7	-	-
Virginia	37.5	6.0	1.8	29.7	(Z)	(Z)
West Virginia	125.4	17.3	2.9	104.7	.3	.2
Wyoming	109.5	102.9	5.2	1.3	-	-

¹Coal, n.s.k. is not included.

Table 7a. Selected Supplies, Minerals Received for Preparation, and Purchased Machinery Installed: 1982 and 1977

[Includes quantity and cost of supplies consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Supply code	Industry and supply consumed	1982		1977	
		Quantity	Delivered cost (million dollars)	Quantity	Delivered cost (million dollars)
	INDUSTRY 1111, ANTHRACITE				
	Selected supplies used, minerals received for preparation, and purchased machinery installed.....	(X)	107.1	(X)	83.0
	Minerals or ores for preparation:				
121191	Raw coal received for mechanical cleaning by wet-washing or pneumatic methods mil. s. tons..	2.0	31.9	2.8	40.2
121193	Raw coal received for mechanical crushing, screening, or sizing only..... do..	.3	11.1	.2	2.9
121191	Raw coal mechanically cleaned by wet-washing or pneumatic methods, mined and prepared at same establishment..... do..	8.1	(X)	6.6	(X)
121193	Raw coal mechanically crushed, screened, or sized, mined and prepared at same establishment..... do..	.7	(X)		
353020	Purchased machinery installed, including mobile loading and transportation equipment.....	(X)	12.1		
353030	Parts and attachments (except those listed elsewhere) for construction, mining, and conveying equipment; and for preparation machinery.....	(X)	12.6	(X)	14.6
	Supplies used:				
221100	Filter and brattice cloth.....	(X)	(Z)	(X)	(1)
241100	Round or hewn wood products and stumpage.....	(X)	.2	(X)	.2
289211	Explosive materials, except ammonium nitrate..... mil. lb..	4.0	2.2	1.8	.5
289212	Ammonium nitrate..... do..	31.4	2.6	35.5	2.6
289214	Blasting accessories.....	(X)	.6	(X)	.3
290000	Lubricating oils and greases, including hydraulic oils.....	(X)	2.0	(X)	(3)
301100	Tires and inner tubes.....	(X)	2.3	(X)	(3)
306000	Rubber and plastics products (hose, conveyor belting, etc.) except tires, tubes, and gaskets.....	(X)	.1	(X)	(1)
327010	Concrete products.....	(X)	(Z)	(X)	(3)
331201	Steel mill shapes and forms (such as plates, sheets, roof bolts, bars, rails, wheels, pipe, tubing, wire products, and structural shapes).....	(X)	.6	(X)	2.4
345210	Roof bolts.....	(X)	(Z)	(X)	(Z)
349010	Wire rope, cable, springs, and other fabricated wire products, excluding wire.....	(X)	.2	(X)	(3)
353310	Drill bits and reamers.....	(X)	1.3	(X)	(3)
970099	All other supplies ²	(X)	12.0	(X)	11.5
974000	Undistributed—minerals, purchased machinery, parts, attachments, and supplies used ³	(X)	14.6	(X)	7.5

See footnotes at end of table.

Table 7a. Selected Supplies, Minerals Received for Preparation, and Purchased Machinery Installed: 1982 and 1977—Con.

[Includes quantity and cost of supplies consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Supply code	Industry and supply consumed	1982		1977	
		Quantity	Delivered cost (million dollars)	Quantity	Delivered cost (million dollars)
	INDUSTRY 1112, ANTHRACITE MINING SERVICES				
	Selected supplies used, minerals received for preparation, and purchased machinery installed.....	(X)	1.5	(X)	2.3
	Minerals or ores for preparation:				
353020	Purchased machinery installed, including mobile loading and transportation equipment	(X)	(D)	(X)	.8
353030	Parts and attachments (except those listed elsewhere) for construction, mining, and conveying equipment; and for preparation machinery	(X)	(D)		
	Supplies used:				
289212	Ammonium nitrate mil. lb..	(D)	(D)	(X)	(D)
289218	Explosive materials (except ammonium nitrate) and blasting accessories.....	(X)	(D)		
331201	Steel mill shapes and forms (such as plates, sheets, roof bolts, bars, rails, wheels, pipe, tubing, wire products, and structural shapes).....	(X)	(D)	(X)	.4
970099	All other supplies	(X)	(D)		
974000	Undistributed—minerals, purchased machinery, parts, attachments, and supplies used ³	(X)	1.3	(X)	(D)
	INDUSTRY 1211, BITUMINOUS COAL AND LIGNITE				
	Selected supplies used, minerals received for preparation, and purchased machinery installed.....	(X)	9 402.8	(X)	8 652.8
	Minerals or ores for preparation:				
121191	Raw coal received for mechanical cleaning by wet-washing or pneumatic methods mil. s. tons..	119.8	2 772.2	92.4	1 700.2
121191	Raw coal mechanically cleaned by wet-washing or pneumatic methods, mined and prepared at same establishment..... do..	429.4	(X)	295.7	(X)
121193	Raw coal received for mechanical crushing, screening, or sizing only do..	18.8	400.5	23.9	416.1
121193	Raw coal mechanically crushed, screened, or sized, mined and prepared at same establishment do..	309.6	(X)	224.7	(X)
353020	Purchased machinery installed, including mobile loading and transportation equipment	(X)	1 582.8	(X)	2 447.4
353030	Parts and attachments (except those listed elsewhere) for construction, mining, and conveying equipment; and for preparation machinery	(X)	1 200.8		
	Supplies used:				
221100	Filter and brattice cloth	(X)	25.8	(X)	(¹)
241100	Round or hewn wood products and stumpage	(X)	81.8	(X)	69.4
289211	Explosive materials, except ammonium nitrate mil. lb..	215.5	89.8	218.2	82.2
289212	Ammonium nitrate do..	1 638.8	189.0	1 529.7	118.5
289214	Blasting accessories	(X)	36.2	(X)	25.3
290000	Lubricating oils and greases, including hydraulic oils	(X)	142.5	(X)	(¹)
301100	Tires and inner tubes.....	(X)	99.2	(X)	(¹)
306000	Rubber and plastics products (hose, conveyor belting, etc.) except tires, tubes, and gaskets	(X)	77.0	(X)	(¹)
327010	Concrete products	(X)	32.5	(X)	(¹)
329510	Nonmetallic mineral products (rock dust, other prepared nonmetallic minerals and earths, etc.)	(X)	49.8	(X)	(¹)
331201	Steel mill shapes and forms (such as plates, sheets, roof bolts, bars, rails, wheels, pipe, tubing, wire products, and structural shapes).....	(X)	106.2	(X)	121.7
335700	Nonferrous metal wire including trolley wire	(X)	26.9	(X)	(¹)
345210	Roof bolts	(X)	240.3	(X)	136.5
349010	Wire rope, cable, springs, and other fabricated wire products, excluding wire	(X)	68.9	(X)	(¹)
353310	Drill bits and reamers	(X)	101.9	(X)	(¹)
970099	All other supplies ²	(X)	1 096.4	(X)	1 235.3
974000	Undistributed—minerals, purchased machinery, parts, attachments, and supplies used ³	(X)	1 002.7	(X)	320.2
	INDUSTRY 1213, BITUMINOUS COAL AND LIGNITE MINING SERVICES				
	Selected supplies used, minerals received for preparation, and purchased machinery installed.....	(X)	152.1	(X)	120.7
	Minerals or ores for preparation:				
353020	Purchased machinery installed, including mobile loading and transportation equipment	(X)	26.5	(X)	53.6
353030	Parts and attachments (except those listed elsewhere) for construction, mining, and conveying equipment; and for preparation machinery	(X)	24.4		
	Supplies used:				
289212	Ammonium nitrate mil. lb..	35.5	3.9	71.3	8.2
289218	Explosive materials (except ammonium nitrate) and blasting accessories.....	(X)	5.8	(X)	3.2
331201	Steel mill shapes and forms (such as plates, sheets, roof bolts, bars, rails, wheels, pipe, tubing, wire products, and structural shapes).....	(X)	9.3	(X)	4.1
970099	All other supplies	(X)	24.8	(X)	33.3
974000	Undistributed—minerals, purchased machinery, parts, attachments, and supplies used ³	(X)	57.5	(X)	20.3

¹Cost for this supply is shown separately in 1982. In 1977, this category was included in all other supplies.

²A number of supplies included in the all other supplies category in 1977 are now shown separately.

³Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

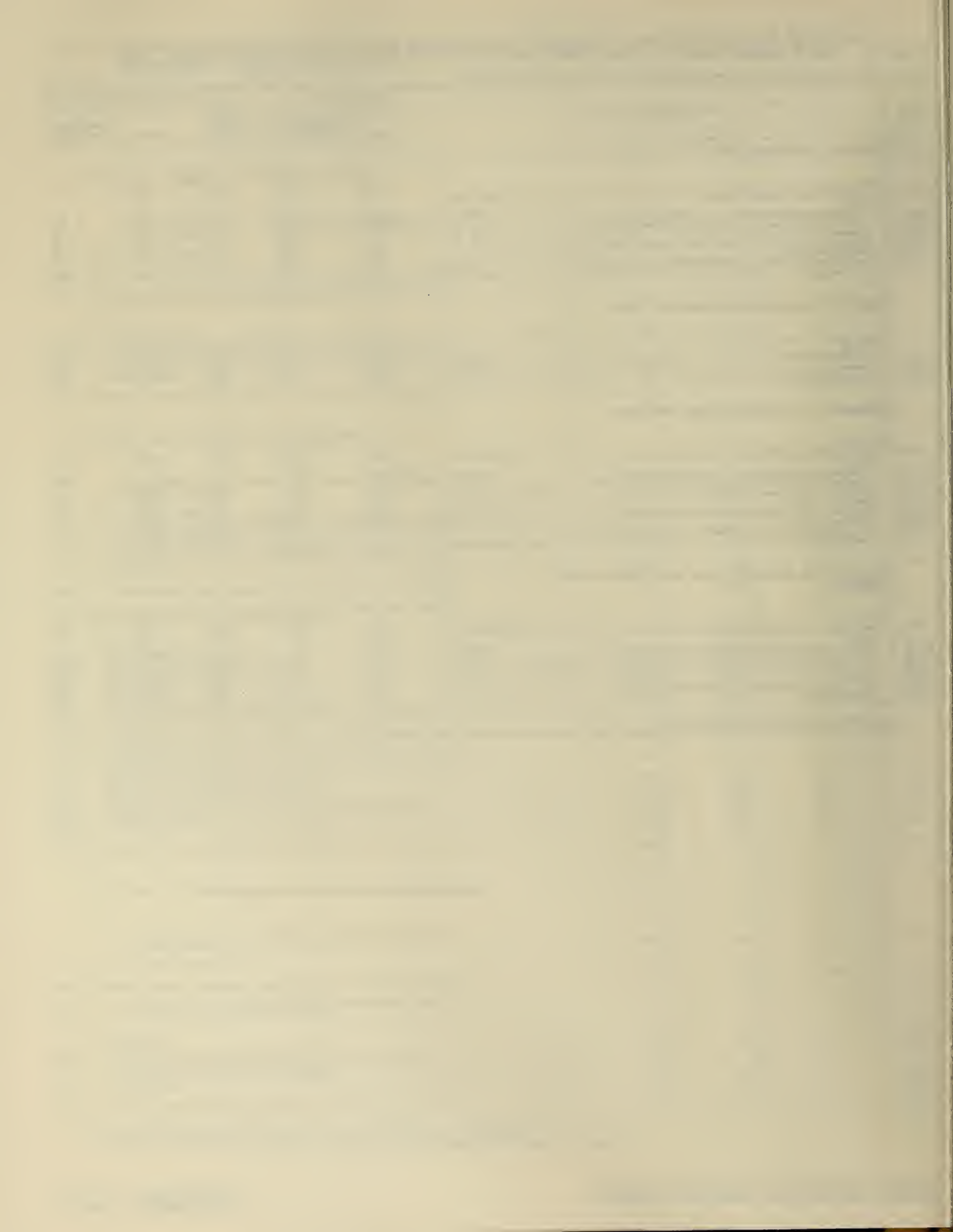
Table 7b. Fuels Consumed by Type, 1982 and 1977, and End-of-Year Fuel Stocks, 1982

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Fuel code	Industry and fuel consumed	1982 consumption		1982 end-of-year stocks ¹ (quantity)	1977 consumption	
		Quantity	Delivered cost (million dollars)		Quantity	Delivered cost (million dollars)
	INDUSTRY 1111, ANTHRACITE					
121005	Fuels used	(X)	11.0	(X)	(X)	4.6
	Coal—bituminous, lignite, and anthracite 1,000 s. tons..	.7	(Z)	.1	5.1	.2
	Fuel oil:					
291141	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel 1,000 bbl..	183.6	7.6	14.1	(D)	(D)
291151	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel do..	(D)	(D)	(D)	(D)	(D)
291111	Gasoline mil. gal..	.9	1.0	.1	1.7	.9
960018	Other fuels—liquefied petroleum gas, coke, wood, and other	(X)	(Z)	(X)	(X)	(Z)
977000	Undistributed fuels ²	(X)	(D)	(X)	(X)	(D)
121195	Coal—bituminous, lignite, and anthracite produced and used at same establishment 1,000 s. tons..	8.1	(X)	(X)	12.9	(X)
	INDUSTRY 1112, ANTHRACITE MINING SERVICES					
	Fuels used	(X)	.3	(X)	(X)	.4
	Fuel oil:					
291141	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel 1,000 bbl..	1.3	.1	.1	(D)	(D)
291111	Gasoline mil. gal..	(Z)	(Z)	(Z)	.1	.1
977000	Undistributed fuels ²	(X)	.2	(X)	(X)	(D)
	INDUSTRY 1211, BITUMINOUS COAL AND LIGNITE					
	Fuels used	(X)	613.0	(X)	(X)	221.6
121005	Coal—bituminous, lignite, and anthracite 1,000 s. tons..	(D)	(D)	4.4	168.6	4.3
	Fuel oil:					
291141	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel 1,000 bbl..	10 794.2	464.0	553.9	6 214.0	149.9
291151	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel do..	1 438.4	47.2	51.0	1 155.4	20.3
131157	Gas—natural, manufactured, and mixed bil. cu. ft..	.7	2.8	(X)	1.7	2.6
291111	Gasoline mil. gal..	56.5	64.9	2.6	58.0	31.1
960018	Other fuels—liquefied petroleum gas, coke, wood, and other	(X)	3.5	(X)	(X)	3.2
977000	Undistributed fuels ²	(X)	(D)	(X)	(X)	10.2
121195	Coal—bituminous, lignite, and anthracite produced and used at same establishment 1,000 s. tons..	161.7	(X)	(X)	306.1	(X)
	INDUSTRY 1213, BITUMINOUS COAL AND LIGNITE MINING SERVICES					
	Fuels used	(X)	35.9	(X)	(X)	16.6
121005	Coal—bituminous, lignite, and anthracite 1,000 s. tons..	(D)	(D)	(D)	(D)	(Z)
	Fuel oil:					
291141	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel 1,000 bbl..	416.3	16.3	10.6	564.1	10.1
291151	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel do..	74.6	2.6	2.6	89.7	1.4
131157	Gas—natural, manufactured, and mixed bil. cu. ft..	(Z)	(Z)	(X)	(Z)	(Z)
291111	Gasoline mil. gal..	5.9	8.7	(D)	3.5	1.8
960018	Other fuels—liquefied petroleum gas, coke, wood, and other	(X)	.5	(X)	(X)	(Z)
977000	Undistributed fuels ²	(X)	(D)	(X)	(X)	3.5

¹Fuel stocks were collected for the first time in 1982.

²Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.



APPENDIX

Explanation of Terms

Employment and related items—The report forms requested separate information on production, development, and exploration workers as of a payroll period for each quarter of the year and for other employees as of the payroll period which included the 12th of March.

All employees—This item includes all full-time and part-time employees on the payrolls of mining establishments for any part of the pay period which included the 12th of the months specified on the report form. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Also included are employees working for miners paid on a per ton, car, or yard basis. Excluded are employees at the mine but on the payroll of another employer (such as employees of contractors) and employees at company stores, boarding houses, bunk houses, and recreational centers. Also excluded are members of the Armed Forces and pensioners carried on the active rolls but not working during the period. Officers of corporations are included as employees, but proprietors and partners of unincorporated firms are excluded.

Production, development, and exploration workers—This category includes employees (up through the working supervisor level) engaged in manual work: using tools, operating machines, hauling materials, loading and hauling products out of the mine in mine cars or trucks, and caring for mines, plants, mills, shops, or yards. Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial, and guard services, auxiliary production for use at establishments (such as power plant), record keeping, and other services closely associated with these production and development operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. In addition, other employees at the establishment but not on its payroll are included if paid directly through its own employees, such as superintendents and supervisors. The payments received by these types of employees are included as part of the establishments payroll. Supervisory employees above the working supervisor level are excluded from this category.

All other employees—Nonproduction personnel at the establishment include those engaged in the following activities: Supervision above the working supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal,

personnel (including cafeteria and medical), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the establishment engaged in the construction of major additions or alterations to the plant and who are utilized as a separate work force. (Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.)

Separately operated auxiliary establishments employees—This item includes employment at separate central administrative offices or auxiliary units of multiestablishment companies and at those offices or units servicing more than one establishment during the payroll period which included March 12. Establishments were classified on the basis of the industry or principal industry served. Employees at an office located at or near the mining establishment are usually included in the mine report.

All employees, average for year—The 1982 census report form requested employment figures for production, development, and exploration workers for four selected pay periods (mid-March, May, August, and November). For all other employees, only a mid-March figure was requested. The annual average is an average of the four monthly figures for production, development, and exploration workers plus the March figure for all other employees. This approach was used to simplify the schedule format and lighten the reporting burden of respondents, since it was found that the average of these selected pay periods closely approximates, for most industries, the average employment for the year that would be obtained from 12 monthly pay periods.

Payroll—This term includes all forms of compensation such as salaries, wages, commissions, payments received on a ton, car, or yard basis, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of these establishments, if a corporation; it excludes payments to the proprietor or partners, if an unincorporated concern, and payments to members of Armed Forces and pensioners carried on the active payroll of mining establishments. Also excluded are royalty payments to unions and costs of smithing, explosives, fuses, electric cap lamps, and mine supplies used in production and development work but charged to employees and deducted from their wages. As in the case of employment and establishment figures, the annual payrolls of separate auxiliary establishments of multiestablishment companies are included in the totals for individual industries and for States. Respondents were told that in reporting they could follow the definition of payroll used for calculating the Federal withholding tax.

Production, development, and exploration worker hours—This item represents all hours that production, development, and exploration workers worked, both on active days during which there was production or development work and on inactive days when only security guards, inspectors, repairpersons, and other maintenance persons were on duty. It includes all hours worked or paid for at the mining operations, except hours paid for vacations, holidays, or sick leave, when the employee was not at the establishment. Included are actual overtime hours, not straight-time equivalent hours. Hours of working proprietors or partners are excluded.

Supplemental labor costs—This item represents employer's cost for fringe benefits not included in payrolls.

Legally required expenditures, including social security contributions—This cost includes employer contributions for all programs required under Federal and State legislation, such as Federal Old Age and Survivors' Insurance, unemployment compensation, and worker's compensation. Also included are legally required State temporary disability payments.

Payments for voluntary programs—Included in this cost are payments resulting from union negotiated contracts and all employer payments of insurance premiums on hospital and medical plans, life insurance premiums, and premiums on supplementary accident and sickness insurance. For programs supported by joint employer-employee contributions, only the employer payments are included. Also included are payments or allocations on all pension plans regardless of methods of administration, supplemental unemployment compensation plans, welfare plans, stock purchase plans in which the employer payment is not subject to withholding tax, and deferred profit sharing plans.

Value added by mining—This measure of mining activity is derived by subtracting the cost of supplies used, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments (mining products plus receipts for services rendered) and total capital expenditures. This statistic avoids the duplication in value of shipments and receipts which results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. For these reasons, it is considered to be the best value measure for comparing the relative economic importance of mining among industries and geographic areas.

Cost of supplies used, purchased machinery installed, etc.—Besides supplies used and purchased machinery installed, this cost includes fuels and electric energy used and contract work done by others for each establishment. It includes charges to both the current and capital accounts. It also includes the cost of items used during 1982 whether they were purchased, withdrawn from inventories, or received from other establishments of the company. For selected supplies and fuels and for electric energy, both quantity and cost data were requested. The cost data refer to direct charges actually paid or payable (after discounts) for items used during the year.

Freight charges and other direct charges incurred by the establishment in acquiring the item are included. Companies whose records did not show actual amounts used were asked to approximate use by adding purchases (or receipts) during the year to opening inventory and subtracting closing inventory. Separate figures were requested for: (1) selected supplies used, minerals received for preparation, and purchased machinery installed; (2) electric energy purchased; (3) purchased fuels used for heat, power, or the generation of electricity; (4) contract work done by others; and (5) products bought and resold in the same condition. Supplies and equipment used in mine development, plant expansion, and capitalized repairs, which are chargeable to fixed assets accounts, are included in this item, as are supplies furnished without charge to contractors for use at the mining operation and supplies sold to employees for use at the establishment. Excluded are such costs as advertising, insurance, telephone, and research and consulting services of other establishments; or such overhead costs as depreciation charges, rent, interest, and royalties.

Selected supplies used, minerals prepared, etc.—In addition to the total cost of supplies used, purchased machinery installed, etc., which every establishment was required to report, information was also collected on the consumption of major supplies used in mining. These inquiries were restricted to supplies which were important parts of the cost of production, exploration, and development of a particular industry and for which cost information was available. Table 7a contains information on specific supplies consumed. On report forms for almost all mineral industries except the contract services and the crude petroleum and natural gas industries, a uniform inquiry was included on minerals prepared at the reported establishments. Figures were obtained on crude minerals mined at the establishment (quantity), received from other establishments of the company or purchased from others (quantity and cost), and received for preparation on a custom or toll basis (quantity and estimated value). Establishments consuming less than a specified amount (usually \$25,000) were not required to report the cost of a supply. For small establishments for which administrative records were used, the cost of supplies was included in "not specified by kind." (See the section on "Summary of Findings" for the importance of administrative records to an industry.)

Value of shipments and receipts and net shipments—The amounts shown as value of shipments and receipts for each industry (tables 1-5), and for individual products or classes of products (table 6), are the net selling values, f.o.b. mine or plant after discounts and allowances, excluding freight charges. "Shipments" include all products physically shipped from the establishment during 1982, including material withdrawn from stockpiles and products shipped on consignment, whether or not sold in 1982. Prepared material or concentrates include preparation from ores mined at the same establishment, purchased, received from other operations of the same company, or received for milling on a custom or toll basis. For products transferred to other establishments of the same company or prepared on a custom basis, companies were requested to report the estimated value, not merely the cost of producing the items. Multiestablishment companies were asked to report value information for each establishment as if it were a separate economic unit. They were instructed to report the value of all products

transferred to other plants of the company at their full economic value, i.e., to include, in addition to direct cost of production, a reasonable proportion of company overhead and profits.

For all establishments classified in an industry, value of shipments and receipts includes: (1) the value of all "primary" products of the industry, (2) the value of "secondary" products which are primary to other industries, (3) the receipts for contract work done for others, except custom milling, and (4) the value of products purchased and resold without further processing. Receipts for custom milling are not included to avoid duplication with the value of custom milled ores included in an industry's primary and secondary products.

Some duplication exists in industry and industry group totals because of the inclusion of materials transferred from one establishment to another for mineral preparation or resale. When this duplication is significant, figures generally are shown for both gross and net shipments. The net shipments are obtained by subtracting the value of crude minerals transferred to other establishments for preparation and the value of resales from the gross shipments.

Shipments of individual products—In the 1982 Census of Mineral Industries, information was collected on output for about 200 individual mineral products. In general, the shipments figures of the 1982, 1977, and 1972 Minerals Censuses were confined to separate totals for each crude and each prepared mineral. When shipments were significant, separate figures were also obtained on crude minerals going to preparation plants and those going to consumers.

Figures were collected on both quantity and value of shipments. Shipments include commercial shipments and transfers of products to other operations of the same company. For products that are used to a significant extent within the same establishment for power or heat, and for minerals mined and prepared in the same establishment, total production figures or separate data on production for such uses were collected. Typically, production was also collected for products for which there was usually significant differences between total production and total shipments because of stock changes.

For service industries, the amount received or due for services performed during 1982 was collected as a measure of output. For mine operators who also perform services, the amount received for such services was added to the total value of products shipped to determine total value of shipments and receipts for each establishment.

Table 6 provides the national and State total shipments figures from all industries for each of the products primary to the industry covered.

Capital expenditures—This item covers expenditures made during the year for development and exploration of mineral properties, for new construction, and for purchased machinery chargeable to fixed assets accounts of the mineral establishment. They are the type for which depreciation, depletion, or Office of Minerals Exploration accounts are ordinarily maintained. Capital expenditures during 1982 were to be determined as "additions completed during the year plus construction in progress at the end of the year minus construction in progress at the beginning of the year." Reported capital expenditures were to include work done on contract, as well as by the mine forces. Expenditures for machinery and equipment were to include those made for replacement purposes, as well as those for additions

to capacity. Excluded from these expenditures were costs of maintenance and repairs charged as current operating expense and expenditures for land and mineral rights.

Whenever applicable, separate figures were provided for expenditures for development and exploration of mineral property, construction of preparation plants and other construction, new machinery and equipment, used plant, and used equipment acquired from others.

Gross value of depreciable assets—Assets data were collected on buildings, other structures, machinery, equipment, capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion accounts are maintained. The values shown represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation cost). The data were collected for the beginning and end of the year. Assets at the beginning of the year plus new and used capital expenditures minus retirements should equal assets at the end of the year. For new construction or other improvement projects in progress but not completed by the end of the year, the cumulative capital expenditures were included in the beginning- and end-of-year assets figures.

Retirements—This item represents the gross value of depreciable assets sold, retired, scrapped, destroyed, abandoned, etc., during 1982. The values shown are the acquisition costs of the retired assets. This item includes the value of assets (at acquisition cost rather than current market value) transferred to other establishments of the same company.

Depreciation—This item shows the reduction in value of depreciable assets brought about through use, gradual obsolescence, or the effect of the elements (decay or corrosion) during the year. Included are charges against assets acquired or completed during the year.

Rental payments—This item consists of rental payments made to other companies for use of such depreciable assets as buildings, other structures, machinery, and equipment. It does not include payments made to the parent company or another subsidiary of the parent company for the use of buildings and equipment owned by the parent company or its subsidiary. The value of such company-owned assets is included in the gross value of depreciable assets.

Current account expenditures—This item includes all expenses for mineral properties, exploration, and development charged to current accounts. This includes all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not capitalized, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

Inventories—This item includes inventories of mined or quarried products, and supplies, parts, fuels, etc., at the beginning and end of the year. Included as mined or quarried products are stockpiles of products ready for shipment and stocks of raw products awaiting treatment or beneficiation. Beginning in the

1982 Census of Mineral Industries, all respondents were requested to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from the 1977 census in which respondents were permitted to value their inventories using any generally accepted accounting method. The inventory figures for 1982, therefore, will not be comparable to prior census data because of the change in reporting instructions.

Fuels and electric energy used—This item includes the quantity and cost of fuels and electric energy used in mining. For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and electric energy, and a cost figure is shown for "other fuels" (see

table 7b). Data were also obtained on the quantity of fuels and electric energy produced and consumed at the same establishment. These data are shown for coal, crude petroleum, and natural gas used at the producing establishments for heat and power, and for electric energy generated and used at the same mining operations. In addition, figures for stocks of purchased fuels on hand at the end of the year were reported for the first time in 1982. Every establishment was required to report the total quantity of unexpended fuel it had on hand, including emergency reserves, at the end of the year. Excluded are fuels to be used as feedstocks or raw materials. For electric energy, the quantity generated and used is approximated by subtracting the quantity of electric energy sold from the total quantity generated (excluding generating station use).

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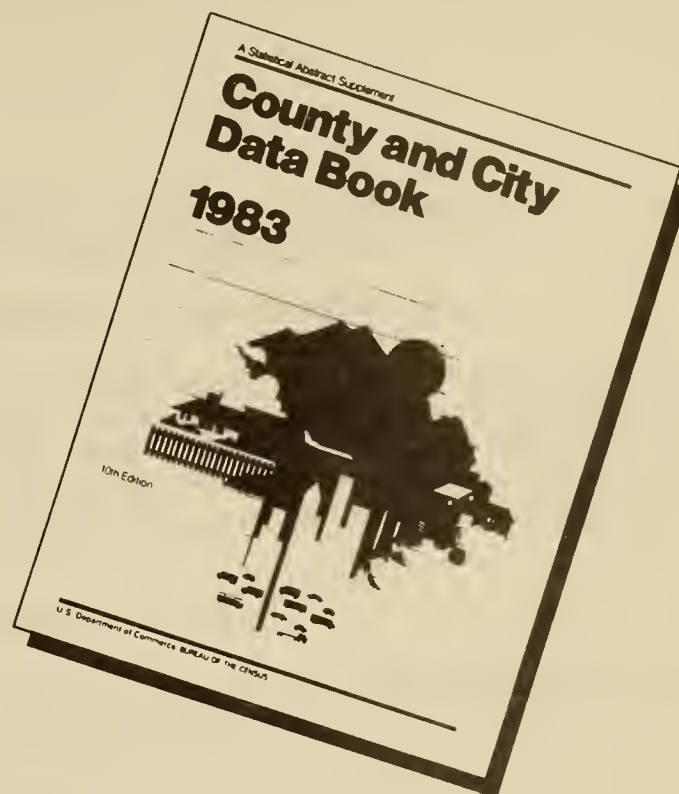
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An outline of the table headings showing the data included in this volume can be obtained at no charge. Also, computer tapes and diskettes containing the data are also available for purchase. For additional information, call 301/763-1034, or write:

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[The following text is extremely faint and illegible due to the quality of the scan. It appears to be a series of lines of text, possibly a list or a description, covering the majority of the lower half of the page.]

PUBLICATION PROGRAM

1982 CENSUS OF MINERAL INDUSTRIES

Publications of the 1982 Census of Mineral Industries, containing data on establishments primarily engaged in the extraction of minerals, are described below. Publications order forms for the specific reports may be obtained from any Department of Commerce district office or from Data User Services Division, Customer Services (Publications), Bureau of the Census, Washington, D.C. 20233.

Preliminary Reports

Preliminary data from the 1982 census have been issued in 12 industry and 2 summary reports covering all of the 42 mineral industries. These reports are superseded by more detailed final reports.

Final Reports

Final detailed statistics are issued in separate paperbound reports.

Industry series—12 reports (MIC82-I-1

Each of the 12 reports provides information on related industries (e.g., clay, ceramic products). Figures for the United States are shown for quantity and value of products shipped; quantity and cost of fuels and electric energy; fuel stocks, and the quantities of fuels purchased; expenditures; assets; rents; employment; depletion; payrolls; hours worked; cost of value added by mining; mineral development; number of establishments; and number of companies. Data for earlier years are included. Industry statistics are shown by type of operation, and size of establishment.

Geographic area series—9 reports (MIC82-G-1

A separate report for each of the 50 States and the District of Columbia provides statistics for individual States for two years, by type of operation and by county. Statistics include shipments, value added by mining, hours worked, capital expenditures, cost of sales,

installed, and number of mining establishments, with comparative 1977 data on employment and value added by mining.

Subject series—7 reports (MIC82-S-1 to -7)

Each of the 7 reports contains detailed statistics for an individual subject, such as water use in mineral industries; gross value of depreciable assets, capital expenditures, retirements, depreciation and rental payments; size of establishments; type of operation; fuels and electric energy consumed; type of organization; and a general National-level summary.

Final Report Volume

Final paperbound reports are subsequently assembled and reissued in one clothbound volume.

Microfiche

Final reports are also available on microfiche.

Public Use Computer Tapes

Public use computer tapes for the census of mineral industries are not part of the economic census publication program. Special orders are available on computer tape on a contract, cost-plus basis, from the Industry Division, Bureau of the Census, Washington, D.C. 20233 for more information.

Related CENSUSES REPORTS

Statistics on wholesale trade, service industries, construction, agriculture, enterprise statistics, minority-owned businesses, and transportation also are published in the 2 Economic Censuses. A separate series of statistics on outlying areas—Puerto Rico, Virgin Islands, Guam, and the Northern Mariana Islands. All publications are sold by the Superintendent of Government Printing Office. Appropriate pamphlets describing these products are available from the Data User Services Division, Customer Services, Bureau of the Census, Washington, D.C. 20233.

Census HD 9506 .U62
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(1982)
1982 census of mineral
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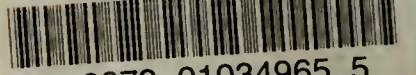
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